

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 1-11-2006
 Art Unit: 1752 Phone Number 302-1333 Serial Number: 10/671,732
 Mail Box and Bldg/Room Location: 9D60 Results Format Preferred: (circle) PAPER DISK E-MAIL
(Rem)

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Bib attached.

SCIENTIFIC REFERENCE BR
 Sci. & Tech. Info. Cntr

Inventors (please provide full names):

JAN 11

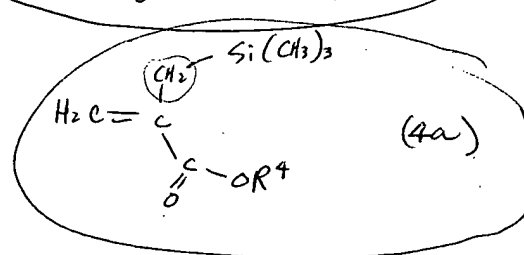
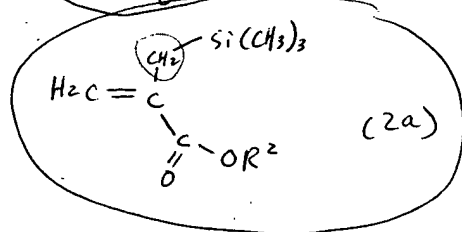
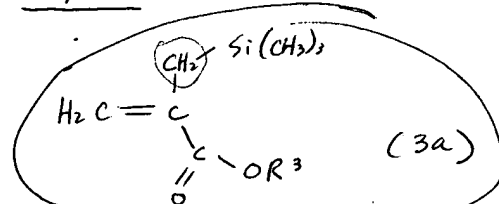
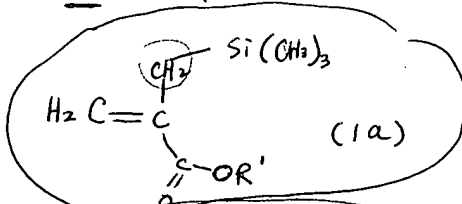
Earliest Priority Filing Date:

Pat. & T.M. Office

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Plz. search for ^{any one of the} monomers of formula (1a) - (4a)

or a polymer made from any one of those formulas



(see cl. #6 for definitions of R' - R⁴)

STAFF USE ONLY

Searcher: MQH
 Searcher Phone #: _____
 Searcher Location: _____
 Date Searcher Picked Up: _____
 Date Completed: 1/12/06
 Searcher Prep & Review Time: _____
 Clerical Prep Time: _____
 Online Time: _____

Type of Search

NA Sequence (#) _____ STN ☒
 AA Sequence (#) _____ Dialog _____
 Structure (#) 5 Questel/Orbit _____
 Bibliographic (4 subject) Dr. Link _____
 Litigation _____ Lexis/Nexis _____
 Fulltext _____ Sequence Systems _____
 Patent Family _____ WWW/Internet _____
 Other _____ Other (specify) _____

Vendors and cost where applicable

=> fil reg

FILE 'REGISTRY' ENTERED AT 16:24:53 ON 12 JAN 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 American Chemical Society (ACS)

=> d his

(FILE 'HOME' ENTERED AT 10:41:02 ON 12 JAN 2006)

FILE 'HCAPLUS' ENTERED AT 10:41:14 ON 12 JAN 2006
E US20040067436/PN

L1 1 S E3
SEL RN

FILE 'REGISTRY' ENTERED AT 10:41:54 ON 12 JAN 2006
L2 21 S E1-21

FILE 'HCAPLUS' ENTERED AT 10:42:17 ON 12 JAN 2006
L3 1 S L1 AND L2

FILE 'LREGISTRY' ENTERED AT 11:06:19 ON 12 JAN 2006
L4 STR

FILE 'REGISTRY' ENTERED AT 11:10:40 ON 12 JAN 2006
L5 STR L4
L6 STR L5
L7 6 S L6
L8 138 S L6 FUL
L9 13 S L2 AND L8
SAV L8 LEE732/A

FILE 'HCAPLUS' ENTERED AT 12:06:47 ON 12 JAN 2006
L10 104 S L8
L11 23 S L9
L12 4992 S ACID? (2A) (LABIL? OR LABL?)
L13 0 S L10 AND L12

FILE 'REGISTRY' ENTERED AT 13:22:19 ON 12 JAN 2006
L14 STR L6
L15 5 S L14 SAM SUB=L8
L16 STR L6
L17 0 S L16 SAM SUB=L8
L18 STR L14

L19 4 S L18 SAM SUB=L8
L20 STR L16
L21 0 S L20 SAM SUB=L8
L22 64 S L18 FUL SUB=L8
L23 4 S L2 AND L22
L24 13 S L20 FUL SUB=L8
L25 STR L14
L26 0 S L25 SAM SUB=L8
L27 5 S L25 FUL SUB=L8
L28 STR L14
L29 1 S L28 SAM SUB=L8
L30 8 S L28 FUL SUB=L8

FILE 'HCAPLUS' ENTERED AT 15:34:35 ON 12 JAN 2006

L31 85 S L22
L32 7 S L24
L33 1 S L27
L34 10 S L30

FILE 'REGISTRY' ENTERED AT 15:39:45 ON 12 JAN 2006

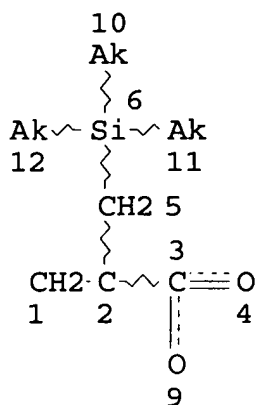
L35 2 S L22 AND PMS/CI

FILE 'HCAPLUS' ENTERED AT 15:41:00 ON 12 JAN 2006

L36 3 S L35
L37 38173 S 74-5/SC,SX
L38 1 S L37 AND L31
L39 33 S L11 OR L32 OR L33 OR L34
L40 35 S L39 OR L36
L41 26736 S (RESIST OR RESISTS OR PHOTORESIST?)/TI
L42 1 S L41 AND L31
L43 478833 S 74/SC,SX
L44 2 S L43 AND L31
L45 QUE (35 OR 36 OR 37 OR 38)/SC,SX
L46 8 S L45 AND L31
L47 10 S L36 OR L38 OR L42 OR L44 OR L46
L48 75 S L31 NOT L47
L49 96165 S (RESIST OR RESISTS OR PHOTORESIST?)
L50 1 S L31 AND L49
L51 19 S L11 NOT (L32 OR L33 OR L34)

FILE 'REGISTRY' ENTERED AT 16:24:53 ON 12 JAN 2006

=> d l22 que stat
L6 STR



NODE ATTRIBUTES:

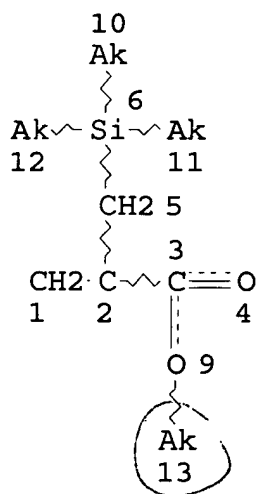
CONNECT IS E1 RC AT 10
CONNECT IS E1 RC AT 11
CONNECT IS E1 RC AT 12
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L8 138 SEA FILE=REGISTRY SSS FUL L6
L18 STR

R₁

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 10
CONNECT IS E1 RC AT 11
CONNECT IS E1 RC AT 12
CONNECT IS E1 RC AT 13
DEFAULT MLEVEL IS ATOM
GGCAT IS SAT AT 13
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L22 64 SEA FILE=REGISTRY SUB=L8 SSS FUL L18

100.0% PROCESSED 138 ITERATIONS
SEARCH TIME: 00.00.01

64 ANSWERS

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 16:25:58 ON 12 JAN 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

=> d 147 cbib abs hitstr hitind 1-10

L47 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
2004:293281 Document No. 140:329540 Polymerizable silicon-containing
compound for polymer **resist** composition and patterning
process. Kinsho, Takeshi; Watanabe, Takeru; Hasegawa, Koji (Japan).
U.S. Pat. Appl. Publ. US 2004067436 A1 20040408, 22 pp.
(English). CODEN: USXXCO. APPLICATION: US 2003-671732 20030929. ✓
PRIORITY: JP 2002-285171 20020930.

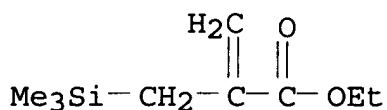
AB Polymerizable silicon-contg. compds. of formula:
 $(\text{CH}_3)_3\text{SiCH}_2\text{C}(\text{=CH}_2)\text{C}(\text{=O})\text{OR}_1$ (R_1 = hydrogen, halogen or monovalent
org. group) are polymd. into polymers. A resist compn. comprising
the polymer as a base resin is sensitive to high-energy radiation,
has excellent sensitivity and resoln. at a wavelength of less than
300 nm, and high resistance to oxygen plasma etching, and thus lends
itself to micropatterning for the fabrication of VLSIs.

IT 74976-84-4P 75366-36-8P 100548-24-1P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)

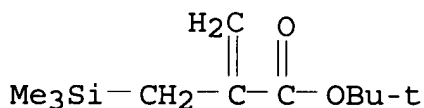
RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)



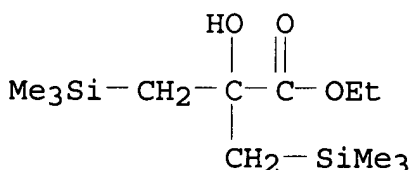
RN 75366-36-8 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl
 ester (9CI) (CA INDEX NAME)



RN 100548-24-1 HCAPLUS

CN Propanoic acid, 2-hydroxy-3-(trimethylsilyl)-2-
 [(trimethylsilyl)methyl]-, ethyl ester (9CI) (CA INDEX NAME)



IT 677776-00-0P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)

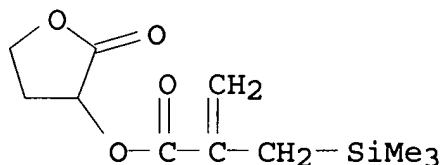
RN 677776-00-0 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl
 ester, polymer with tetrahydro-2-oxo-3-furanyl 2-
 [(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 677775-93-8

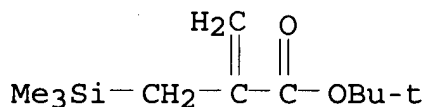
CMF C11 H18 O4 Si



CM 2

CRN 75366-36-8

CMF C11 H22 O2 Si



IC ICM G03C001-73

ICS G03F007-039; G03F007-20; G03F007-30; G03F007-38; G03F007-36

INCL 430270100; 430905000; 430907000; 430910000; 430326000; 430914000;
430327000; 430328000; 430331000; 430313000CC 74-5 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)

IT 74976-84-4P 75366-35-7P 75366-36-8P

100548-24-1P 677775-91-6P 677775-92-7P 677775-93-8P

677775-94-9P 677775-96-1P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);

PREP (Preparation); RACT (Reactant or reagent)

(polymerizable silicon-contg. compd. for polymer resist compn.
and patterning process)

IT 677775-97-2P 677775-98-3P 677775-99-4P 677776-00-0P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)(polymerizable silicon-contg. compd. for polymer resist compn.
and patterning process)

L47 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

2000:314737 Document No. 132:335047 Solid catalyst component having heteroatom-containing malonate for α -olefin polymerization. Morini, Giampiero; Balbontin, Giulio; Gulevich, Yuri V. (Montell Technology Company BV, Neth.). PCT Int. Appl. WO 2000026259 A1 20000511, 20 pp. DESIGNATED STATES: W: AU, BR, CA, CN, HU, IL, IN, JP, KR, MX, RU, SG, US, ZA; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1999-EP8018 19991022. PRIORITY: EP 1998-203733 19981104.

AB A solid catalyst component for stereospecific polymn. of α -olefins comprises Ti, Mg, halogen, and an electron donor compd. selected from heteroatom-contg. esters of malonic acids. A catalyst system for olefin polymn. includes the above catalyst component, an alkylaluminum compd., and an external electron donor, such as a silane compd. Isotactic polypropylene was manufd. with high yield and high isotactic index (expressed in terms of high xylene insoly.) by using the catalyst system.

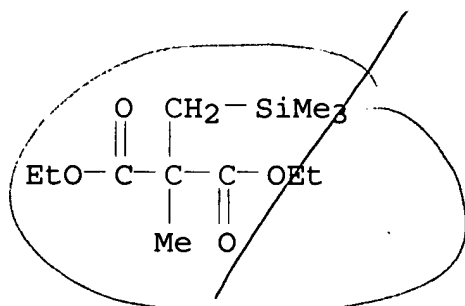
IT 18141-66-7

RL: CAT (Catalyst use); USES (Uses)

(solid catalyst component having heteroatom-contg. malonate for α -olefin polymn.)

RN 18141-66-7 HCAPLUS

CN Propanedioic acid, methyl[(trimethylsilyl)methyl]-, diethyl ester (9CI) (CA INDEX NAME)



IC ICM C08F004-651

ICS C08F004-654; C08F010-00; C07C069-38

CC 35-3 (Chemistry of Synthetic High Polymers)

IT 1558-95-8 7550-45-0, Titanium tetrachloride, uses 7705-07-9, Titanium trichloride, uses 7786-30-3, Magnesium chloride, uses 17962-38-8, Diethyl 2-(trimethylsilylmethyl)malonate

18141-66-7 21980-12-1 37556-13-1 40479-09-2

41649-48-3 101172-66-1 111654-32-1 130624-23-6 130624-25-8

267431-36-7 267431-37-8 267431-38-9 267431-39-0 267431-40-3

267431-41-4 267431-42-5 267431-43-6

RL: CAT (Catalyst use); USES (Uses)

(solid catalyst component having heteroatom-contg. malonate for α -olefin polymn.)

L47 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1999:487121 Document No. 131:144983 Free-radical chain transfer polymerization process. Rizzardo, Ezio; Meijs, Gordon Francis; Thang, San Hoa (Commonwealth Scientific and Industrial Research Organisation, Australia). U.S. US 5932675 A 19990803, 23 pp. (English). CODEN: USXXAM. APPLICATION: US 1997-823299 19970321. PRIORITY: US 1989-372357 19890605; US 1991-731393 19910717; US 1993-72687 19930607; US 1994-325496 19941019; US 1995-478515 19950607.

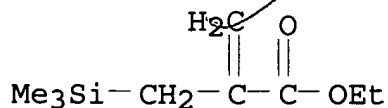
AB A process for the prodn. of lower mol. wt. polymers by free-radical polymn. uses $\text{CH}_2=\text{C}[\text{CH}_2\text{X}(\text{R}_2)_n]\text{R}_1$ as alternatives to thiols or other chain transfer agents for the control of mol. wt., where R_1 is a group capable of activating vinylic carbon toward free radical addn., exclusive of hydrogen, R_2 is alkyl, alkenyl, alkynyl, or a satd, unsatd. or arom. carbocyclic or heterocyclic ring, optionally contg. hydroxy, amino, halogen, phosphonate, trialkylsilyl, cyano, epoxy, carboxylic acid, carboxylic acid ester, allyl or alkyl substituents, X is S, Si, Se, P, Br, Cl, Sn, phosphonate, sulfoxide sulfone or phosphine oxide, and n is 0-3, such that the valency of X is satisfied and, when $n > 1$, R_2 is identical or different. Thus, Me methacrylate contg. azobisisobutyronitrile and α -(tert-butanethiomethyl)styrene (I) was polymd. for 1 h at 60° in the absence of oxygen. The chain transfer const. calcd. for I was 1.24, indicating that I was an efficient chain transfer agent and produced poly(Me methacrylate) of low mol. wt. in a controlled manner.

IT 74976-84-4P

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(chain-transfer agent; for mol. wt. control in free-radical polymn. of vinyl compds.)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



IC ICM C08F002-38

INCL 526289000

CC 35-4 (Chemistry of Synthetic High Polymers)

IT 25150-08-7P 25186-51-0P 51876-00-7P 51876-03-0P 60154-85-0P,
 α -(2-Hydroxyethylthiomethyl)styrene 74976-84-4P
89295-32-9P, Ethyl α -(benzenesulfonylmethyl)acrylate
92822-43-0P 108286-71-1P 116233-34-2P, α -(tert-
Butylthiomethyl)styrene 116233-35-3P 118729-71-8P 118729-73-0P
118769-89-4P 118769-92-9P 118769-96-3P 118769-99-6P
118770-08-4P 118770-23-3P 118770-39-1P, α -
Benzyloxyacrylonitrile 118770-44-8P, Methyl α -
benzyloxyacrylate 118770-49-3P, α -Benzyloxyacrylamide
118770-56-2P, α -(4-Methoxycarbonylbenzyloxy)styrene
118770-59-5P 118770-64-2P, α -(4-Cyanobenzyloxy)styrene
118770-67-5P 118770-70-0P 118770-72-2P, α -Benzyloxy[4-
chloromethyl)styrene] 118770-74-4P 118770-76-6P 118770-80-2P
118770-83-5P 118770-85-7P 118770-87-9P 118770-90-4P
118770-92-6P 118770-95-9P 118770-97-1P 118770-99-3P
118992-87-3P

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP
(Preparation); USES (Uses)

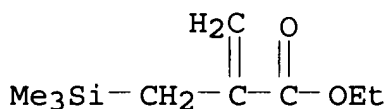
(chain-transfer agent; for mol. wt. control in free-radical
polymn. of vinyl compds.)

L47 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1998:38909 Document No. 128:61908 Vinyl compounds in radical
polymerization for polymer molecular weight control and end-group
functionality. Meijs, Gordon Francis; Rizzardo, Ezio; Thang, San
Hoa (Commonwealth Scientific and Industrial Research Organisation,
Australia). Pat. Specif. (Aust.) AU 682408 B2 19971002, 57 pp.
(English). CODEN: ALXXAP. APPLICATION: AU 1994-79029 19941125.

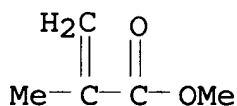
AB Compds. CH₂:CRCH₂X(R')_n, where R is H or a group capable of
activating the vinyl carbon towards free radical addn. and selected
from optionally substituted Ph or other arom. groups, or
alkoxycarbonyl or aryloxycarbonyl, carboxy, acyloxy, carbamoyl,
cyano groups or halogen; R' is an optionally substituted alkyl,
alkenyl, alkynyl, or satd., unsatd. or arom. carbocyclic or
heterocyclic ring; X is a S, Se, P, Br, Sn, and/or O-contg. group
selected from phosphonate, sulfoxide, sulfone and phosphine oxide;
and n = 0-3, such that the valency of the group X is satisfied and,
when n is greater than 1, R' are identical or different are used to
control the mol. wt. and end-group functionality of polymers prepd.
by radical polymn. of unsatd. compds. Thus, 4 mL of a mixt. of 45
mL Me methacrylate and 49.5 mg AIBN contg. 17.4 mg
 α -(tert-butylthiomethyl)styrene (I) was polymd. 1 h at
60° in the absence of oxygen, giving 10.1% conversion and Mn

27,870, compared with 10.9 and 205,190, resp., without I.
 IT 118770-20-0P, Ethyl α -(trimethylsilylmethyl)acrylate-
 methyl methacrylate telomer
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (prepn. of; vinyl compds. in radical polymn. for polymer mol. wt.
 control and end-group functionality)
 RN 118770-20-0 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, methyl ester, telomer with ethyl
 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)
 CM 1
 CRN 74976-84-4
 CMF C9 H18 O2 Si



CM 2
 CRN 9011-14-7
 CMF (C5 H8 O2)x
 CCI PMS

CM 3
 CRN 80-62-6
 CMF C5 H8 O2



IC ICM C07C321-20
 ICS C07C323-52; C07C323-12; C07C323-25; C07C317-10; C07C317-44;
 C07C323-60; C07C323-54; C07F007-18; C07F009-11; C07F007-08;
 C07F007-22
 CC 35-2 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 24

IT 118769-83-8P, α -(tert-Butylthiomethyl)styrene-methyl methacrylate telomer 118769-84-9P, α -(tert-Butylthiomethyl)styrene-styrene telomer 118769-85-0P, α -(tert-Butylthiomethyl)styrene-methyl acrylate telomer 118769-86-1P, α -(tert-Butylthiomethyl)styrene-vinyl acetate telomer 118769-87-2P, α -(n-Butylthiomethyl)styrene-methyl methacrylate telomer 118769-88-3P, α -(n-Butylthiomethyl)styrene-styrene telomer 118769-90-7P, α -(Carboxymethylthiomethyl)styrene-methyl methacrylate telomer 118769-91-8P, α -(Carboxymethylthiomethyl)styrene-styrene telomer 118769-93-0P, α -(Carboxyethylthiomethyl)styrene-styrene telomer 118769-94-1P, α -(Hydroxyethylthiomethyl)styrene-methyl methacrylate telomer 118769-95-2P, α -(Hydroxyethylthiomethyl)styrene-styrene telomer 118769-97-4P, α -(2-Aminoethylthiomethyl)styrene-methyl methacrylate telomer 118769-98-5P, α -(2-Aminoethylthiomethyl)styrene-styrene telomer 118770-00-6P, Styrene- α -[3-(trimethoxysilyl)propylthiomethyl]styrene telomer 118770-01-7P, α -(Bromomethyl)styrene-methyl methacrylate telomer 118770-02-8P, α -(Bromomethyl)styrene-styrene telomer 118770-03-9P, α -(Bromomethyl)styrene-methyl acrylate telomer 118770-04-0P, Ethyl α -(tert-butylthiomethyl)acrylate-methyl methacrylate telomer 118770-05-1P, Ethyl α -(tert-butylthiomethyl)acrylate-styrene telomer 118770-06-2P, Ethyl α -(tert-butylthiomethyl)acrylate-methyl acrylate telomer 118770-07-3P, Ethyl α -(tert-butylthiomethyl)acrylate-vinyl acetate telomer 118770-09-5P, Ethyl α -(carboxymethylthiomethyl)acrylate-methyl methacrylate telomer 118770-10-8P, Ethyl α -(carboxymethylthiomethyl)acrylate-styrene telomer 118770-12-0P, α -(Carboxymethylthiomethyl)acrylic acid-methyl methacrylate telomer 118770-13-1P, α -(Carboxymethylthiomethyl)acrylic acid-styrene telomer 118770-14-2P, α -(tert-Butylthiomethyl)acrylonitrile-methyl methacrylate telomer 118770-15-3P, α -(tert-Butylthiomethyl)acrylonitrile-styrene telomer 118770-16-4P, α -(tert-Butylthiomethyl)acrylonitrile-methyl acrylate telomer 118770-17-5P, α -(tert-Butylthiomethyl)acrylonitrile-vinyl acetate telomer 118770-18-6P, Ethyl α -(bromomethyl)acrylate-methyl acrylate copolymer 118770-19-7P, α -(Diethoxyphosphorylmethyl)styrene-methyl methacrylate telomer 118770-20-0P, Ethyl α -(trimethylsilylmethyl)acrylate-methyl methacrylate telomer 118770-21-1P, Ethyl α -(benzenesulfonylmethyl)acrylate-methyl methacrylate telomer 118770-22-2P, Ethyl α -(benzenesulfonylmethyl)acrylate-styrene telomer 118770-24-4P 118770-26-6P, α -

(Benzenesulfonylmethyl)vinyl acetate-methyl methacrylate telomer
 118770-27-7P, α -(Benzenesulfonylmethyl)vinyl acetate-styrene
 telomer 118770-28-8P, α -(Benzenesulfonylmethyl)vinyl
 acetate-methyl acrylate telomer 118770-29-9P, α -
 (Benzenesulfonylmethyl)vinyl acetate-vinyl acetate telomer
 118770-30-2P, α -(Bromomethyl)acrylonitrile-methyl methacrylate
 telomer 118770-31-3P, α -(Bromomethyl)acrylonitrile-methyl
 acrylate telomer 118770-32-4P, α -(Chloromethyl)acrylonitrile-
 methyl acrylate telomer 118770-33-5P, Acrylonitrile- α -(tert-
 butylthiomethyl)acrylonitrile telomer 118770-34-6P,
 Acrylonitrile- α -(tert-butylthiomethyl)styrene telomer
 118804-58-3P, Ethyl α -(bromomethyl)acrylate-methyl
 methacrylate copolymer 118804-59-4P, Ethyl α -(tri-n-
 butylstannylmethyl)acrylate-methyl methacrylate telomer
 RL: IMF (Industrial manufacture); PREP (Preparation)

(prepn. of; vinyl compds. in radical polymn. for polymer mol. wt.
 control and end-group functionality)

L47 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1996:546638 Document No. 125:248901 Hydrosilylating unsaturated
 monomers. Lewis, Larry N.; Carothers, Terrell W. (General Electric
 Company, USA). U.S. US 5550272 A 19960827, 6 pp. (English).
 CODEN: USXXAM. APPLICATION: US 1995-538149 19951002.

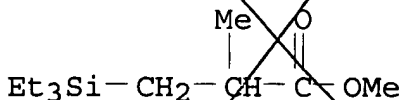
AB Polymn./crosslinking is prevented by using a free-radical polymn.
 inhibitor in the hydrosilylation of unsatd. monomers in the presence
 of a transition metal catalyst. Thus, heating a mixt. contg.
 SiH-stopped silicone fluid, acrylonitrile, 4-hydroxyTEMPO, and a Pt
 catalyst soln. 2 h at 111° gave a viscose silicone oil with
 100% of the SiH groups converted to CHMeCN groups.

IT 18002-64-7P

RL: IMF (Industrial manufacture); PREP (Preparation)
 (hydrosilylating unsatd. monomers in presence of polymn.
 inhibitors)

RN 18002-64-7 HCAPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, methyl ester (9CI) (CA
 INDEX NAME)



IC ICM C07F007-08
 ICS C07F007-10

INCL 556479000

CC 35-10 (Chemistry of Synthetic High Polymers)

IT 107-13-1DP, Acrylonitrile, reaction products with hydrogen siloxanes
18002-64-7P 24636-31-5P, Methacryloxypropyldimethylsilyl
chloride 182070-65-1P 182070-71-9P

RL: IMF (Industrial manufacture); PREP (Preparation)
(hydrosilylating unsatd. monomers in presence of polymn.
inhibitors)

L47 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1995:591826 Document No. 123:183184 Platinum(II) Bis(β -
diketonates) as Photoactivated Hydrosilation Catalysts. Lewis,
Frederick D.; Salvi, Gwen D. (Department of Chemistry, Northwestern
University, Evanston, IL, 60208-3113, USA). Inorganic Chemistry,
34(12), 3182-9 (English) 1995. CODEN: INOCAJ. ISSN: 0020-1669.
Publisher: American Chemical Society.

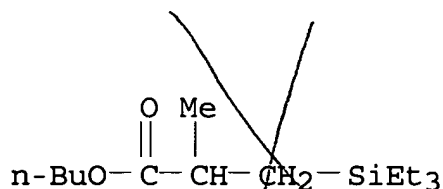
AB Irradn. of hydrosilanes and olefin in the presence of platinum(II)
bis(β -diketonates) results in olefin hydrosilation. The
initial rate of hydrosilation is dependent upon the choice of
 β -diketonate ligand, hydrosilane, and olefin. Formation of an
active catalyst requires the presence of either triethylsilane or
triethylvinylsilane during a brief period of irradiation. Addition of the
second reactant results in hydrosilation without further irradiation.
Substantial inhibition of hydrosilation is observed when
dibenzo[a,e]cyclooctatetraene is added following irradiation and prior
to addition of the second reactant, but not when mercury is added
following irradiation. These results indicate that the active form of
the photogenerated catalyst is homogeneous rather than
heterogeneous. Correlation of hydrosilation reactivity with the
spectroscopic changes which occur during irradiation suggests that the
primary photoproduct is not catalytically active and that a
secondary photochemical reaction results in the loss of one of the two
 β -diketonate ligands and the formation of the active catalyst.

IT 167423-64-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(platinum(II) bis(β -diketonates) as photoactivated olefin
hydrosilation catalysts)

RN 167423-64-5 HCAPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, butyl ester (9CI) (CA
INDEX NAME)



CC 74-1 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)

Section cross-reference(s): 22

IT 2295-15-0P, 1,2-Bis(triethylsilyl)ethane 13810-04-3P 14355-62-5P
18279-65-7P 61210-56-8P 90722-97-7P 167423-62-3P
167423-63-4P **167423-64-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(platinum(II) bis(β-diketonates) as photoactivated olefin
hydrosilation catalysts)

L47 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1991:82601 Document No. 114:82601 Chain transfer activity of some
activated allylic compounds. Meijs, Gordon F.; Rizzardo, Ezio;
Thang, San H. (Div. Chem. Polym., CSIRO, Clayton, 3168, Australia).
Polymer Bulletin (Berlin, Germany), 24(5), 501-5 (English) 1990.
CODEN: POBUDR. ISSN: 0170-0839.

AB Various olefins that were activated towards radical addn. and
contained a homolytic leaving group in the allylic position were
effective chain-transfer agents in radical polymns. of Me
(meth)acrylate, styrene, and vinyl acetate. These allylic compds.
included bromides, phosphonates, stannanes, thioethers, sulfoxides,
and sulfones. Allylic silanes and chlorides, however, did not
possess significant chain-transfer activity. Suitable activating
substituents towards radical addn. were Ph, EtOCO, CN, and AcO.
Several of the compds. had an advantage over thiols in that they did
not contain S.

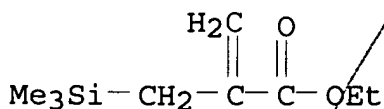
IT **74976-84-4**

RL: USES (Uses)

(chain-transfer agents, for Me methacrylate polymn.)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 35-3 (Chemistry of Synthetic High Polymers)
IT 106-95-6, 3-Bromo-1-propene, uses and miscellaneous
74976-84-4 108286-71-1
RL: USES (Uses)
(chain-transfer agents, for Me methacrylate polymn.)

L47 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
1989:76295 Document No. 110:76295 Control of molecular weight and end group functionality of polymers. Rizzardo, Ezio; Meijs, Gordon Francis; Thang, San Hoa (Commonwealth Scientific and Industrial Research Organization, Australia). PCT Int. Appl. WO 8804304 A1 19880616, 95 pp. DESIGNATED STATES: W: AU, JP, US; RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE. (English). CODEN: PIXXD2.
APPLICATION: WO 1987-AU412 19871204. PRIORITY: AU 1986-9351 19861205; AU 1987-3813 19870819.

AB CH2:CR1Y [R1 = H or a group capable of activating the vinyl group towards free radical addn.; Y = CH2XR2n or OR2; R2 = (substituted) alkyl, (substituted) alkenyl, (substituted) alkynyl, or carbo- or heterocyclic ring, X = element other than C from Group IV, V, VI, or VII or Group IV, V, or VI to which is attached ≥ 1 O, n = 0-3] are useful in controlling mol. wt. and end-group functionality in free-radical polymn. Thus, 4 mL of a soln. prepd. from 25 mL Me methacrylate and 49.5 mg AIBN was polymd. 1 h at 60° in the presence of 9.0, 17.4, 31.4, and 61.6 mg α -(tert-butylthiomethyl)styrene [I, prepd. by reaction of α -(bromomethyl)styrene with Me3CSH] to give polymer samples with no.-av. mol. wts. 46,071, 27,870, 16,795, and 9600, resp., at conversions 10.4, 10.1, 9.4, and 8.6, resp., compared with 205,190 and 10.9%, resp., in the absence of I.

IT 118770-20-0P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manuf. of oligomeric)

RN 118770-20-0 HCAPLUS

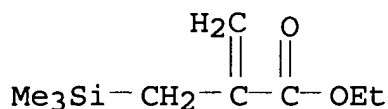
CN 2-Propenoic acid, 2-methyl-, methyl ester, telomer with ethyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 74976-84-4

CMF C9 H18 O2 Si

↳ being used
as chain-transfer
agent
(not part of
final polymer)



CM 2

CRN 9011-14-7

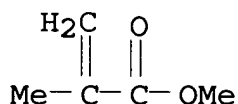
CMF (C5 H8 O2)x

CCI PMS

CM 3

CRN 80-62-6

CMF C5 H8 O2



IC ICM C08F002-38

ICS C07C149-267; C07C149-273; C07C147-14; C07C149-20; C07C121-30;
 C07C069-92; C07C149-415; C07C043-176; C07C121-75; C07C043-178;
 C07C093-00; C07C043-215; C07C069-157; C07C069-16; C07C121-38;
 C07C069-708; C07C103-175; C07F007-18; C07F009-40

CC 35-4 (Chemistry of Synthetic High Polymers)

| | | | | |
|----|--------------|--------------|--------------|---------------------|
| IT | 118729-72-9P | 118729-74-1P | 118729-75-2P | 118729-77-4P |
| | 118769-83-8P | 118769-84-9P | 118769-85-0P | 118769-86-1P |
| | 118769-87-2P | 118769-88-3P | 118769-90-7P | 118769-91-8P |
| | 118769-93-0P | 118769-94-1P | 118769-95-2P | 118769-97-4P |
| | 118769-98-5P | 118770-00-6P | 118770-01-7P | 118770-02-8P |
| | 118770-03-9P | 118770-04-0P | 118770-05-1P | 118770-06-2P |
| | 118770-07-3P | 118770-09-5P | 118770-10-8P | 118770-12-0P |
| | 118770-13-1P | 118770-14-2P | 118770-15-3P | 118770-16-4P |
| | 118770-17-5P | 118770-18-6P | 118770-19-7P | 118770-20-0P |
| | 118770-21-1P | 118770-22-2P | 118770-24-4P | 118770-26-6P |
| | 118770-27-7P | 118770-28-8P | 118770-29-9P | 118770-30-2P |
| | 118770-31-3P | 118770-32-4P | 118770-33-5P | 118770-34-6P |
| | 118770-35-7P | 118770-36-8P | 118770-37-9P | 118770-38-0P |
| | 118770-40-4P | 118770-41-5P | 118770-42-6P | 118770-43-7P |
| | 118770-45-9P | 118770-46-0P | 118770-47-1P | 118770-48-2P |

| | | | |
|--------------|--------------|--------------|--------------|
| 118770-50-6P | 118770-51-7P | 118770-52-8P | 118770-53-9P |
| 118770-54-0P | 118770-55-1P | 118770-57-3P | 118770-58-4P |
| 118770-60-8P | 118770-61-9P | 118770-62-0P | 118770-63-1P |
| 118770-65-3P | 118770-66-4P | 118770-68-6P | 118770-69-7P |
| 118770-71-1P | 118770-73-3P | 118770-75-5P | 118770-77-7P |
| 118770-79-9P | 118770-81-3P | 118770-82-4P | 118770-84-6P |
| 118770-86-8P | 118770-88-0P | 118770-89-1P | 118770-91-5P |
| 118770-93-7P | 118770-94-8P | 118770-96-0P | 118770-98-2P |
| 118771-00-9P | 118804-58-3P | 118804-59-4P | 118804-60-7P |
| 118858-07-4P | | | |

RL: IMF (Industrial manufacture); PREP (Preparation)
(manuf. of oligomeric)

L47 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1987:440071 Document No. 107:40071 A process for the preparation of silyl ketene acetals. Revis, Anthony; Little, Michael Dean; Dinh, Paul Charles (Dow Corning Corp., USA). Eur. Pat. Appl. EP 219322 A2 19870422, 23 pp. DESIGNATED STATES: R: DE, FR, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1986-307834 19861010. PRIORITY: US 1985-787287 19851015.

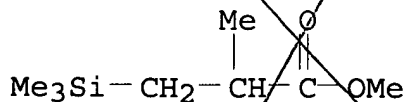
AB The title compds. are prepd. by reaction of an organosilane with methacrylic acid, (or derivs. thereof) in the presence of RhCl₃ catalyst. Thus, 2 mol Me methacrylate was treated with 2 mol Me₃SiH at 45-75° in the presence of 0.2 g methoxyhydroquinone (polymn. inhibitor) and 0.06 g RhCl₃ to give Me₂C:C(OMe)(OSiMe₃) and lesser amts. of CH₂:CMeCH(OMe)(OSiMe₃) and Me₃SiCH₂CHMeCO₂Me as byproducts depending on the exact reaction conditions.

IT 18388-42-6P

RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in reaction of Me methacrylate with trimethylsilane)

RN 18388-42-6 HCAPLUS

CN Propanoic acid, 2-methyl-3-(trimethylsilyl)-, methyl ester (9CI)
(CA INDEX NAME)



IC ICM C07F007-18

ICS C07F007-04; C08G077-38

CC 29-6 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 35

IT 18388-42-6P 109081-61-0P

RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in reaction of Me methacrylate with
trimethylsilane)

L47 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1986:573090 Document No. 105:173090 Activation of hydrogen transfer
from silicon hydrides and thiols by binuclear manganese and rhenium
carbonyls in a radical telomerization. Freidlina, R. Kh.;
Terent'ev, A. B.; Petrova, R. G.; Churkina, T. D.; Moskalenko, M. A.
(Inst. Elementoorg. Soedin., Moscow, USSR). Doklady Akademii Nauk
SSSR, 288(6), 1436-9 [Phys. Chem.] (Russian) 1986. CODEN: DANKAS.
ISSN: 0002-3264.

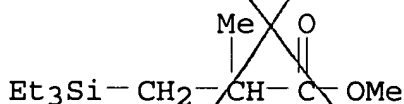
AB Mn₂(CO)₁₀ and Re₂(CO)₁₀ were effective catalysts for the radical
telomerization of vinyl monomers with Et₃SiH and BuSH. In the
telomerization of ethylene with Et₃SiH, the metal carbonyls gave
98-100% Et₄Si [631-36-7], compared with 64% in the presence of
tert-Bu₂O₂ catalyst, which gave also telomers with d.p. 2-3. The
Mn₂(CO)₁₀-Et₃SiH system led to exclusive β-hydrosilylation of
acrylates with practically complete exclusion of polymn. Re₂(CO)₁₀
was a less effective catalyst than Mn₂(CO)₁₀, but chain transfer
occurred similarly in both cases. Radical silylation of unsatd.
compds. with (EtO)₃SiH (I) was hindered by the reactivity of the EtO
groups, but use of Mn₂(CO)₁₀ as catalyst for the addn. of I to
1-hexene gave 15% adduct.

IT 18002-64-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, in telomerization of Me methacrylate with
triethylsilane, in presence of binuclear metal carbonyls)

RN 18002-64-7 HCAPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, methyl ester (9CI) (CA
INDEX NAME)

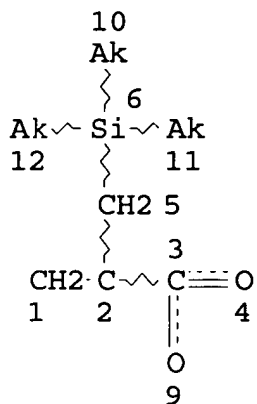


CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 22, 29

IT 18002-64-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, in telomerization of Me methacrylate with
triethylsilane, in presence of binuclear metal carbonyls)

=> d 124 que stat
L6 STR



NODE ATTRIBUTES:

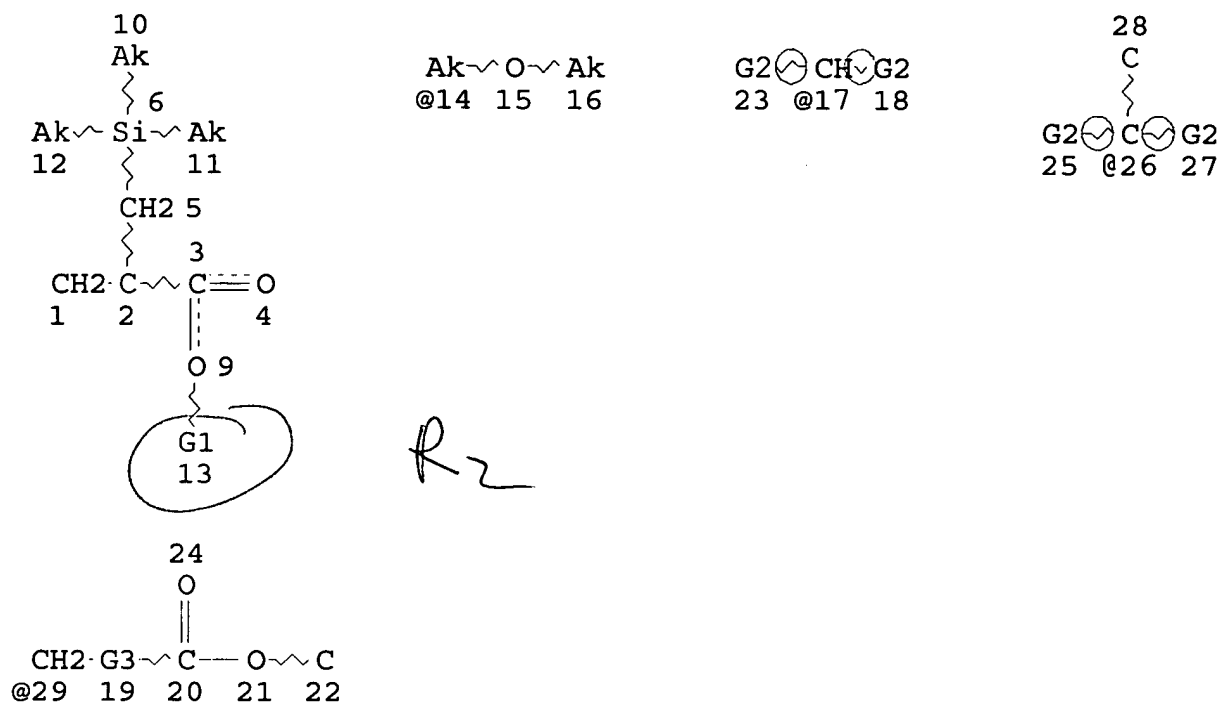
CONNECT IS E1 RC AT 10
CONNECT IS E1 RC AT 11
CONNECT IS E1 RC AT 12
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L8 138 SEA FILE=REGISTRY SSS FUL L6
L20 STR



VAR G1=T-BU/14/17/26/29

VAR G2=C/O

REP G3=(0-5) CH2

NODE ATTRIBUTES:

NSPEC IS RC AT 22

CONNECT IS E1 RC AT 10

CONNECT IS E1 RC AT 11

CONNECT IS E1 RC AT 12

CONNECT IS E2 RC AT 14

CONNECT IS E2 RC AT 16

DEFAULT MLEVEL IS ATOM

GGCAT IS SAT AT 14

GGCAT IS SAT AT 16

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M1-X4 C AT 14

ECOUNT IS M1-X4 C AT 16

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 27

STEREO ATTRIBUTES: NONE

L24 13 SEA FILE=REGISTRY SUB=L8 SSS FUL L20

100.0% PROCESSED 116 ITERATIONS
SEARCH TIME: 00.00.01

13 ANSWERS

=> d l32 cbib abs hitstr hitind 1-7

Applicant.

L32 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN
2004:293281 Document No. 140:329540 Polymerizable silicon-containing compound for polymer resist composition and patterning process. Kinsho, Takeshi; Watanabe, Takeru; Hasegawa, Koji (Japan). U.S. Pat. Appl. Publ. US 2004067436 A1 20040408, 22 pp. (English). CODEN: USXXCO. APPLICATION: US 2003-671732-20030929. PRIORITY: JP 2002-285171 20020930.

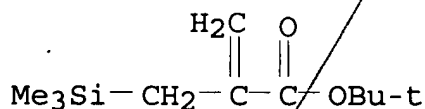
AB Polymerizable silicon-contg. compds. of formula:
(CH₃)₃SiCH₂C(=CH₂)C(=O)OR₁ (R₁ = hydrogen, halogen or monovalent org. group) are polymd. into polymers. A resist compn. comprising the polymer as a base resin is sensitive to high-energy radiation, has excellent sensitivity and resoln. at a wavelength of less than 300 nm, and high resistance to oxygen plasma etching, and thus lends itself to micropatterning for the fabrication of VLSIs.

IT 75366-36-8P 677775-91-6P 677775-92-7P
677775-93-8P 677775-94-9P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);
PREP (Preparation); RACT (Reactant or reagent)
(polymerizable silicon-contg. compd. for polymer resist compn. and patterning process)

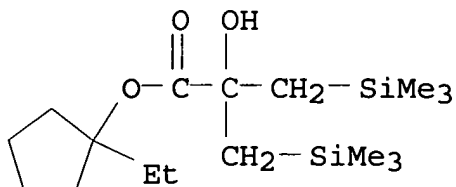
RN 75366-36-8 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



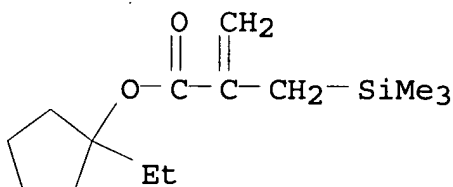
RN 677775-91-6 HCAPLUS

CN Propanoic acid, 2-hydroxy-3-(trimethylsilyl)-2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester (9CI) (CA INDEX NAME)



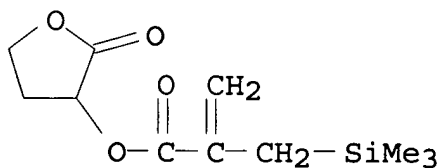
RN 677775-92-7 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester (9CI) (CA INDEX NAME)



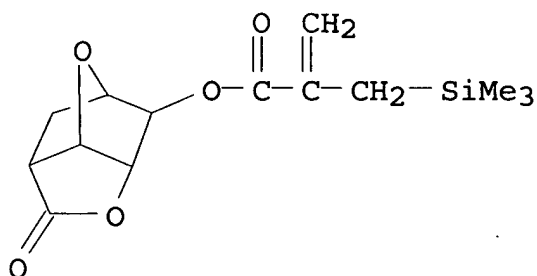
RN 677775-93-8 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, tetrahydro-2-oxo-3-furanyl ester (9CI) (CA INDEX NAME)



RN 677775-94-9 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-yl ester (9CI) (CA INDEX NAME)



IT 677775-97-2P 677775-98-3P 677775-99-4P

677776-00-0P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polymerizable silicon-contg. compd. for polymer resist compn. and patterning process)

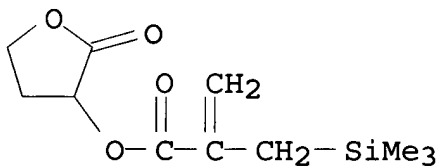
RN 677775-97-2 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 677775-93-8

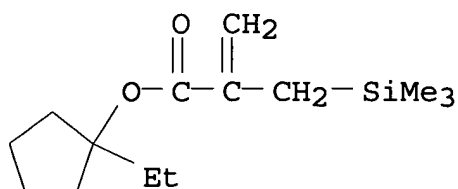
CMF C11 H18 O4 Si



CM 2

CRN 677775-92-7

CMF C14 H26 O2 Si



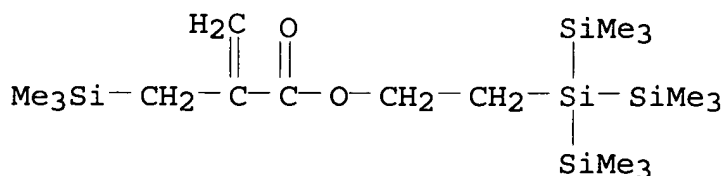
RN 677775-98-3 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate and 2-[2,2,2-trimethyl-1,1-bis(trimethylsilyl)disilanyl]ethyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 677775-96-1

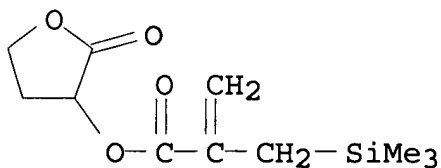
CMF C18 H44 O2 Si5



CM 2

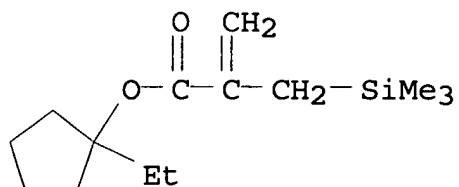
CRN 677775-93-8

CMF C11 H18 O4 Si



CM 3

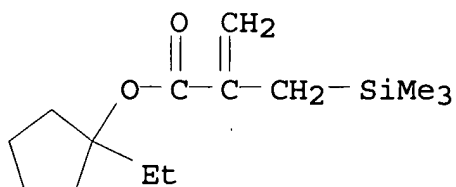
CRN 677775-92-7
CMF C14 H26 O2 Si



RN 677775-99-4 HCAPLUS
CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester, polymer with ethenylheptamethylcyclotetrasiloxane and 2,5-furandione (9CI) (CA INDEX NAME)

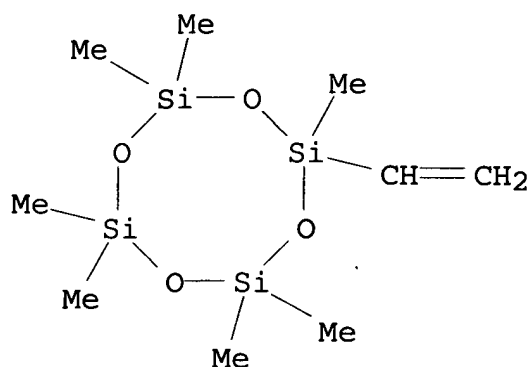
CM 1

CRN 677775-92-7
CMF C14 H26 O2 Si



CM 2

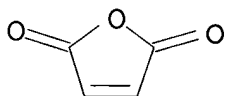
CRN 3763-39-1
CMF C9 H24 O4 Si4



CM 3

CRN 108-31-6

CMF C4 H2 O3



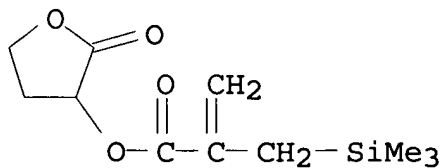
RN 677776-00-0 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 677775-93-8

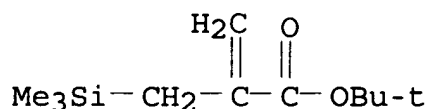
CMF C11 H18 O4 Si



CM 2

CRN 75366-36-8

CMF C11 H22 O2 Si



IC ICM G03C001-73

ICS G03F007-039; G03F007-20; G03F007-30; G03F007-38; G03F007-36

INCL 430270100; 430905000; 430907000; 430910000; 430326000; 430914000;
430327000; 430328000; 430331000; 430313000CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)IT 74976-84-4P 75366-35-7P **75366-36-8P** 100548-24-1P**677775-91-6P 677775-92-7P 677775-93-8P****677775-94-9P 677775-96-1P**

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);

PREP (Preparation); RACT (Reactant or reagent)

(polymerizable silicon-contg. compd. for polymer resist compn.
and patterning process)IT **677775-97-2P 677775-98-3P 677775-99-4P****677776-00-0P**RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)(polymerizable silicon-contg. compd. for polymer resist compn.
and patterning process)

L32 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN

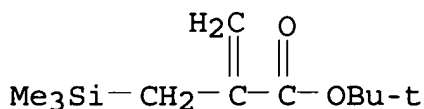
1991:143865 Document No. 114:143865 Chain elongation of
aldonolactones. Csuk, Rene; Glaenger, Brigitte I. (Pharm.-Chem.
Inst., Univ. Heidelberg, Heidelberg, D-6900, Germany). Journal of
Carbohydrate Chemistry, 9(6), 809-22 (English) 1990. CODEN: JCACDM.
ISSN: 0732-8303. OTHER SOURCES: CASREACT 114:143865.AB As an alternative to the classical Reformatskii-type branching
reaction of aldonolactones, Me₃SiCH₂CO₂Et, Me₃SiCHMeCO₂Et,
Me₃SiCH₂CN, or alkyl 2-(trimethylsilylmethyl)acrylates and catalytic
amts. of Bu₄NF can be used. The chain-elongated monosaccharides are
obtained in high yields.IT **75366-36-8**

RL: RCT (Reactant); RACT (Reactant or reagent)

(homologation by, of aldonolactones)

RN 75366-36-8 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



CC 33-8 (Carbohydrates)

IT 4071-88-9, Ethyl trimethylsilylacetate 18293-53-3 55453-09-3
74976-84-4 75366-36-8RL: RCT (Reactant); RACT (Reactant or reagent)
(homologation by, of aldonolactones)

L32 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN

1987:440071 Document No. 107:40071 A process for the preparation of silyl ketene acetals. Revis, Anthony; Little, Michael Dean; Dinh, Paul Charles (Dow Corning Corp., USA). Eur. Pat. Appl. EP 219322 A2 19870422, 23 pp. DESIGNATED STATES: R: DE, FR, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1986-307834 19861010. PRIORITY: US 1985-787287 19851015.

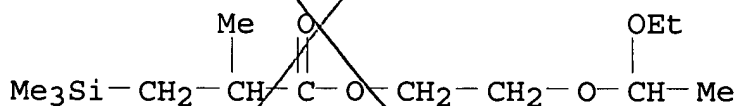
AB The title compds. are prepd. by reaction of an organosilane with methacrylic acid, (or derivs. thereof) in the presence of RhCl3 catalyst. Thus, 2 mol Me methacrylate was treated with 2 mol Me3SiH at 45-75° in the presence of 0.2 g methoxyhydroquinone (polymn. inhibitor) and 0.06 g RhCl3 to give Me2C:C(OMe)(OSiMe3) and lesser amts. of CH2:CMeCH(OMe)(OSiMe3) and Me3SiCH2CHMeCO2Me as byproducts depending on the exact reaction conditions.

IT 109081-65-4P

RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in reaction of methyl(dioxyheptyl) methacrylate with trimethylsilane)

RN 109081-65-4 HCAPLUS

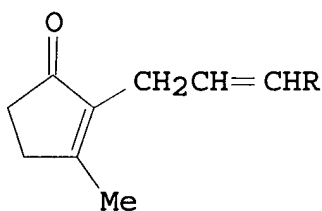
CN Propanoic acid, 2-methyl-3-(trimethylsilyl)-, 2-(1-ethoxyethoxy)ethyl ester (9CI) (CA INDEX NAME)



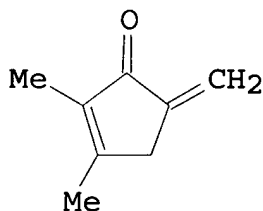
IC ICM C07F007-18

ICS C07F007-04; C08G077-38
CC 29-6 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 35
IT 109081-64-3P **109081-65-4P**
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in reaction of methyl(dioxyheptyl) methacrylate
with trimethylsilane)

L32 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN
1987:195921 Document No. 106:195921 3-Chloro-2-
[(diethoxyphosphoryl)oxy]-1-propene: a new reagent for a one-pot
cyclopentenone annelation. Synthesis of desoxyallethrolone,
cis-jasmone, and methylenomycin B. Welch, S. C.; Assercq, J. M.;
Loh, J. P.; Glase, S. A. (Dep. Chem., Univ. Houston, Houston, TX,
77004, USA). Journal of Organic Chemistry, 52(8), 1440-50 (English)
1987. CODEN: JOCEAH. ISSN: 0022-3263. OTHER SOURCES: CASREACT
106:195921.
GI

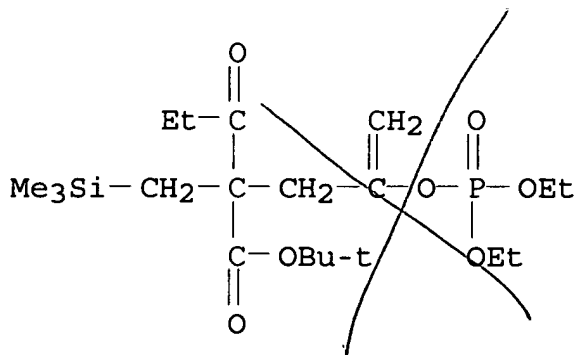


II



III

AB Alkylation studies of the title reagent (I) and other enol
phosphate-based electrophiles with various nucleophiles are
discussed. The application of I to the synthesis of
desoxyallethrolone (II, R = H), cis-jasmone (II, R = Et), and
methylenomycin B (III) is presented.
IT **106763-46-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(prepn. and cyclization of)
RN 106763-46-6 HCAPLUS
CN 4-Pentenoic acid, 4-[(diethoxyphosphinyl)oxy]-2-(1-oxopropyl)-2-
[(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX
NAME)



CC 24-5 (Alicyclic Compounds)

IT 1703-51-1P 6126-53-0P 62359-08-4P 67262-88-8P

106763-46-6P 106763-48-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)

(prepn. and cyclization of)

L32 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN

1982:35532 Document No. 96:35532 Allylcarboxylic acid derivatives.

(Sakurai, Hideki, Japan). Jpn. Kokai Tokkyo Koho JP 56110693 A2

19810901 Showa, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
 1980-14170 19800207.

AB Allylcarboxylic acid derivs. $\text{Me}_3\text{SiCH}_2\text{C}(\text{:CH}_2)\text{COR}$ (I, R = OH, OEt, OSiMe₃, Cl, OCMe₃) were prepd. Thus, 168 g $\text{H}_2\text{C}(\text{CO}_2\text{Et})_2$ in EtOH was added to 23 g Na in EtOH over 30 min under N, the mixt. refluxed 30 min, 123 g Me_3SiCl added over 2 h, and the whole stirred 24 h with heating to give 81% $\text{Me}_3\text{SiCH}_2\text{CH}(\text{CO}_2\text{Et})_2$ (II). A mixt. of 25.4 g II and 5.3 g 50% oily NaH in C_6H_6 was stirred 1.5 h, 26 g CH_2Br_2 added, and the whole stirred 5 h with heating to give 84% $\text{Me}_3\text{SiCH}_2\text{C}(\text{CH}_2\text{Br})(\text{CO}_2\text{Et})_2$ (III). Stirring 63 g III with 39.6 g 85% KOH in aq. EtOH 25 h with heating gave 82% I (R = OH) and 15% I (R = OEt).

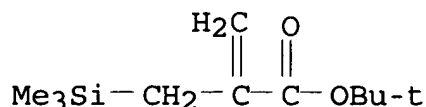
IT 75366-36-8P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

RN 75366-36-8 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



IC C07F007-08; C07F007-18; C07F007-22

CC 29-6 (Organometallic and Organometalloidal Compounds)

IT 26449-03-6P 26613-71-8P 56407-78-4P 74976-84-4P 75366-35-7P
75366-36-8P 75366-37-9P 75366-39-1P 75366-40-4P
 75366-41-5P 75366-43-7P 80421-81-4P 80421-82-5P 80421-83-6P
 80421-84-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

L32 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN

1981:54841 Document No. 94:54841 Electroorganic chemistry. 48. A novel synthesis of terminal olefins by anodic oxidation of carboxylic acids having a trimethylsilyl group on the β -position. Shono, Tatsuya; Omizu, Hiroshi; Kise, Naoki (Fac. Eng., Kyoto Univ., Kyoto, 606, Japan). Chemistry Letters (12), 1517-20 (English) 1980. CODEN: CMLTAG. ISSN: 0366-7022.

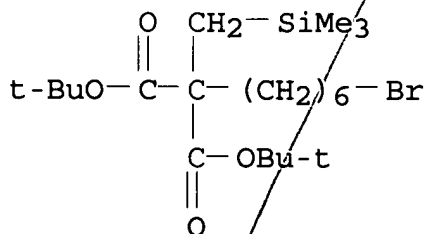
AB Anodic oxidn. of carboxylic acids having a trimethylsilyl group on the β -position gave exclusively terminal olefins in reasonable yields. Thus, 1-tetradecene was formed in 83% yield by anodic oxidn. on C in MeCN-MeOH at const. c.d. 0.017 A/cm².

IT **76402-32-9P 76419-44-8P**

RL: FORM (Formation, nonpreparative); PREP (Preparation)
 (formation of, by reaction of di-tert-butyltrimethylsilylmethylmalonate with corresponding alkyl bromide)

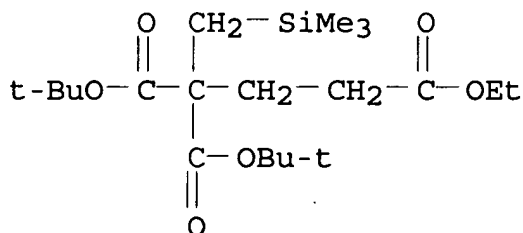
RN 76402-32-9 HCAPLUS

CN Propanedioic acid, (6-bromohexyl)[(trimethylsilyl)methyl]-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 76419-44-8 HCAPLUS

CN 1,1,3-Propanetricarboxylic acid, 1-[(trimethylsilyl)methyl]-,
1,1-bis(1,1-dimethylethyl) 3-ethyl ester (9CI) (CA INDEX NAME)



CC 72-8 (Electrochemistry)

Section cross-reference(s): 22, 23

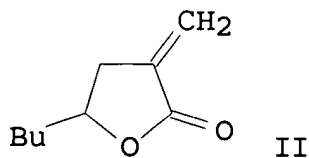
IT 76402-32-9P 76419-44-8P

RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, by reaction of di-tert-
butyltrimethylsilylmethylmalonate with corresponding alkyl
bromide)

L32 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN

1980:604013 Document No. 93:204013 Chemistry of organosilicon
compounds. 134. (2-Alkoxy carbonylallyl)trimethylsilanes as new
reagents of 2-alkoxy carbonylallylation of electrophiles. Hosomi,
Akira; Hashimoto, Hidehiko; Sakurai, Hideki (Dep. Chem., Tohoku
Univ., Sendai, 980, Japan). Tetrahedron Letters, 21(10), 951-4
(English) 1980. CODEN: TELEAY. ISSN: 0040-4039. OTHER SOURCES:
CASREACT 93:204013.

GI



AB Reaction of 2-alkoxy carbonylsilanes with acetals and carbonyl
compds. in the presence of Lewis acids gave alkoxy carbonylallylated
products. Thus, Me₃SiCH₂C(:CH₂)CO₂Et (I) with MeCH(OEt)₂ and TiCl₄
at 0° for 6 h gave 89% EtO₂CC(:CH₂)CHMeOEt. Similarly I with

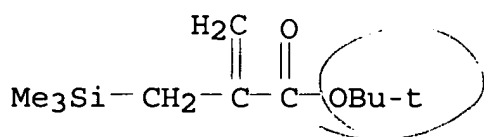
BuCHO and TiCl_4 at 0-25° for 3 h gave 25% II. I was prepd. from $\text{CH}_2(\text{CO}_2\text{Et})_2$ and $\text{Me}_3\text{SiCH}_2\text{Cl}$.

IT 75366-36-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (prepn. and reaction of, with acetals)

RN 75366-36-8 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



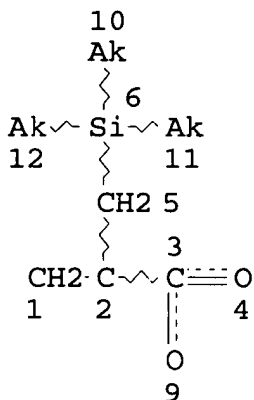
CC 23-17 (Aliphatic Compounds)

IT 56407-78-4P 74976-84-4P 75366-35-7P 75366-36-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (prepn. and reaction of, with acetals)

=> d 127 que stat

L6 STR



NODE ATTRIBUTES:

CONNECT IS E1 RC AT 10

CONNECT IS E1 RC AT 11

CONNECT IS E1 RC AT 12

DEFAULT MLEVEL IS ATOM

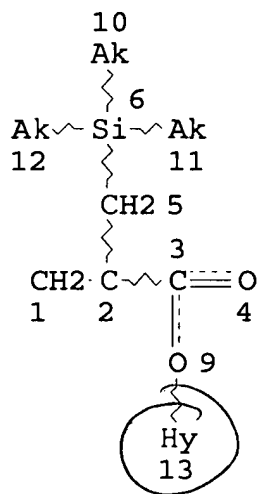
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L8 138 SEA FILE=REGISTRY SSS FUL L6
 L25 STR



NODE ATTRIBUTES:

CONNECT IS E1 RC AT 10
 CONNECT IS E1 RC AT 11
 CONNECT IS E1 RC AT 12
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED
 ECOUNT IS M1 O AT 13

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L27 5 SEA FILE=REGISTRY SUB=L8 SSS FUL L25

100.0% PROCESSED 138 ITERATIONS
 SEARCH TIME: 00.00.01

5 ANSWERS

=> d 133 cbib abs hitstr hitind

Applicant

L33 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2006 ACS on STN

2004:293281 Document No. 140:329540 Polymerizable silicon-containing compound for polymer resist composition and patterning process. Kinsho, Takeshi; Watanabe, Takeru; Hasegawa, Koji (Japan). U.S. Pat. Appl. Publ. US 2004067436 A1 20040408, 22 pp. (English). CODEN: USXXCO. APPLICATION: US 2003-671732 20030929. PRIORITY: JP 2002-285171 20020930.

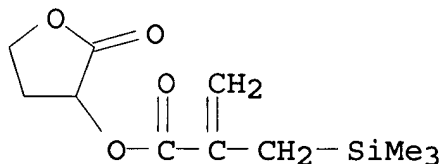
AB Polymerizable silicon-contg. compds. of formula:
(CH₃)₃SiCH₂C(=CH₂)C(=O)OR₁ (R₁ = hydrogen, halogen or monovalent org. group) are polymd. into polymers. A resist compn. comprising the polymer as a base resin is sensitive to high-energy radiation, has excellent sensitivity and resoln. at a wavelength of less than 300 nm, and high resistance to oxygen plasma etching, and thus lends itself to micropatterning for the fabrication of VLSIs.

IT 677775-93-8P 677775-94-9P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(polymerizable silicon-contg. compd. for polymer resist compn. and patterning process)

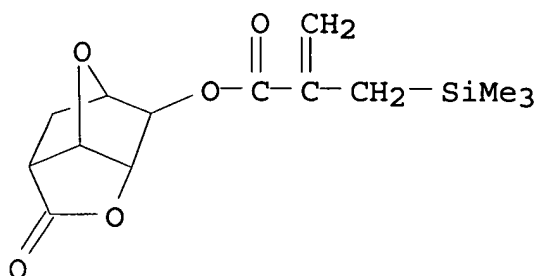
RN 677775-93-8 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, tetrahydro-2-oxo-3-furanyl ester (9CI) (CA INDEX NAME)



RN 677775-94-9 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-yl ester (9CI) (CA INDEX NAME)



IT 677775-97-2P 677775-98-3P 677776-00-0P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymerizable silicon-contg. compd. for polymer resist compn. and patterning process)

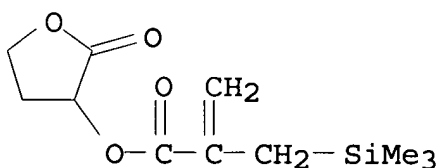
RN 677775-97-2 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 677775-93-8

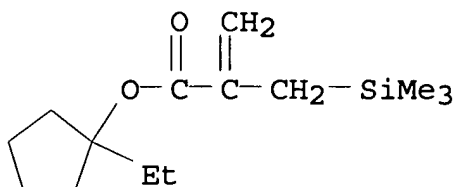
CMF C11 H18 O4 Si



CM 2

CRN 677775-92-7

CMF C14 H26 O2 Si



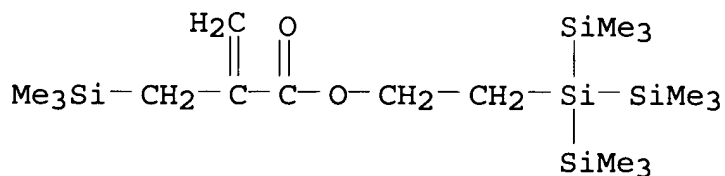
RN 677775-98-3 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate and 2-[2,2,2-trimethyl-1,1-bis(trimethylsilyl)disilanyl]ethyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 677775-96-1

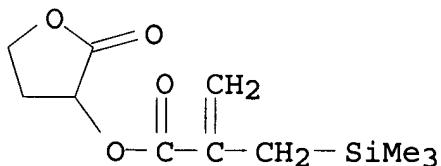
CMF C18 H44 O2 Si5



CM 2

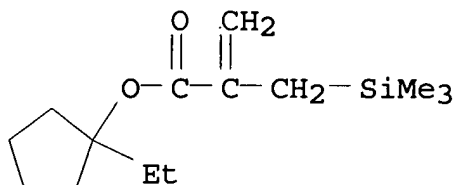
CRN 677775-93-8

CMF C11 H18 O4 Si



CM 3

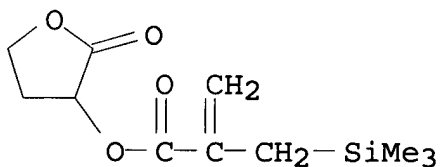
CRN 677775-92-7
CMF C14 H26 O2 Si



RN 677776-00-0 HCAPLUS
CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1,1-dimethylethyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

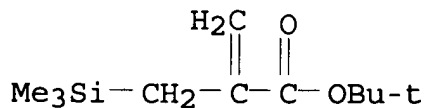
CM 1

CRN 677775-93-8
CMF C11 H18 O4 Si



CM 2

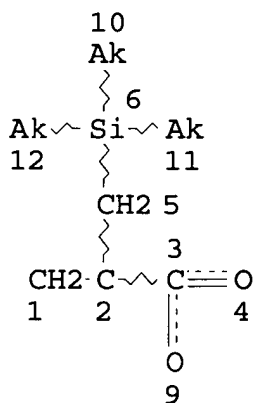
CRN 75366-36-8
CMF C11 H22 O2 Si



IC ICM G03C001-73
ICS G03F007-039; G03F007-20; G03F007-30; G03F007-38; G03F007-36

INCL 430270100; 430905000; 430907000; 430910000; 430326000; 430914000;
 430327000; 430328000; 430331000; 430313000
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 IT 74976-84-4P 75366-35-7P 75366-36-8P 100548-24-1P
 677775-91-6P 677775-92-7P 677775-93-8P
 677775-94-9P 677775-96-1P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)
 IT 677775-97-2P 677775-98-3P 677775-99-4P
 677776-00-0P
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (polymerizable silicon-contg. compd. for polymer resist compn.
 and patterning process)

=> d 130 que stat
 L6 STR



NODE ATTRIBUTES:

CONNECT IS E1 RC AT 10
 CONNECT IS E1 RC AT 11
 CONNECT IS E1 RC AT 12
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

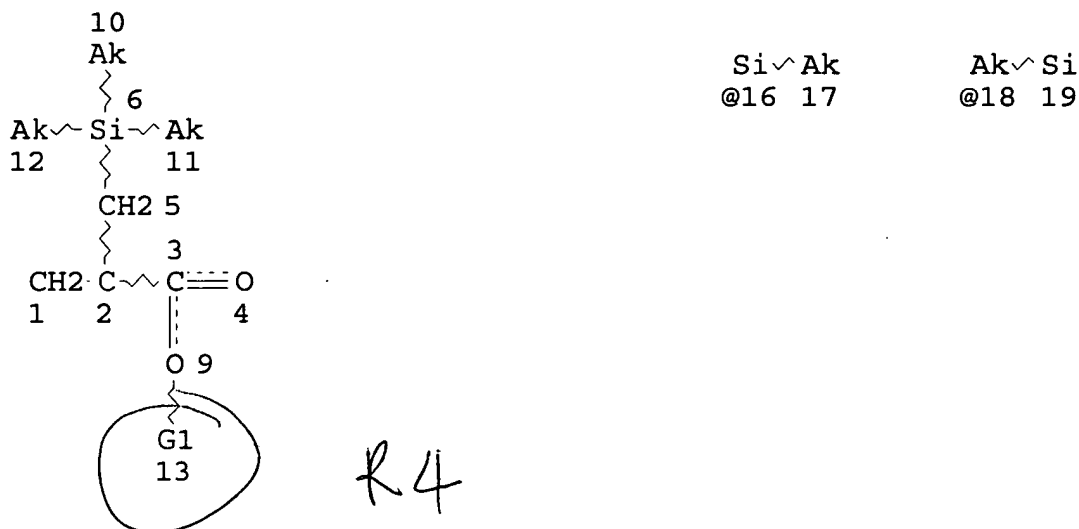
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L8 138 SEA FILE=REGISTRY SSS FUL L6

L28 STR



Ak~O~Si
@20 21 22

VAR G1=16/18/20

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 10

CONNECT IS E1 RC AT 11

CONNECT IS E1 RC AT 12

CONNECT IS E1 RC AT 17

CONNECT IS E2 RC AT 18

CONNECT IS E2 RC AT 20

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE

L30 8 SEA FILE=REGISTRY SUB=L8 SSS FUL L28

100.0% PROCESSED 27 ITERATIONS

8 ANSWERS

SEARCH TIME: 00.00.01

Applicant

L34 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
2004:293281 Document No. 140:329540 Polymerizable silicon-containing
compound for polymer resist composition and patterning process.
Kinsho, Takeshi; Watanabe, Takeru; Hasegawa, Koji (Japan). U.S.
Pat. Appl. Publ. US 2004067436 A1 20040408, 22 pp. (English).
CODEN: USXXCO. APPLICATION: US 2003-671732 20030929. PRIORITY: JP
2002-285171 20020930.

IT 677775-96-1P

RN 677775-96-1 HCAPLUS

$$\text{Me}_3\text{Si}-\text{CH}_2-\overset{\text{H}_2\text{C}}{\underset{\parallel}{\text{C}}}-\overset{\text{O}}{\underset{\parallel}{\text{C}}}-\text{O}-\text{CH}_2-\text{CH}_2-\underset{\text{SiMe}_3}{\overset{\text{SiMe}_3}{\underset{\text{SiMe}_3}{\text{Si}}}}-\text{SiMe}_3$$

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymerizable silicon-contg. compd. for polymer resist compn. and patterning process)

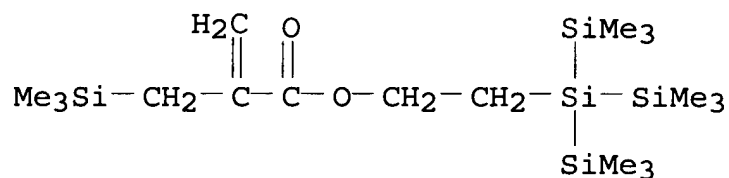
CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, 1-ethylcyclopentyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-[(trimethylsilyl)methyl]-2-propenoate and 2-[2,2,2-trimethyl-1,1-

bis(trimethylsilyl)disilanyl]ethyl 2-[(trimethylsilyl)methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 677775-96-1

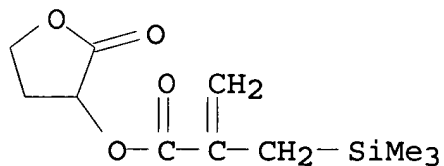
CMF C18 H44 O2 Si5



CM 2

CRN 677775-93-8

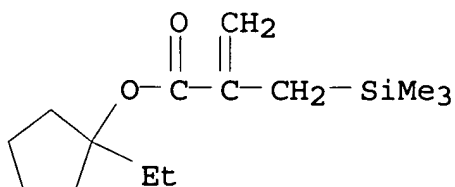
CMF C11 H18 O4 Si



CM 3

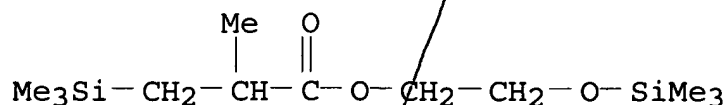
CRN 677775-92-7

CMF C14 H26 O2 Si

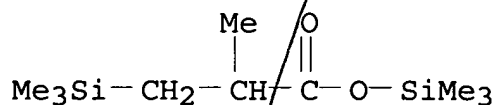


IC ICM G03C001-73
ICS G03F007-039; G03F007-20; G03F007-30; G03F007-38; G03F007-36
INCL 430270100; 430905000; 430907000; 430910000; 430326000; 430914000;
430327000; 430328000; 430331000; 430313000
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
IT 74976-84-4P 75366-35-7P 75366-36-8P 100548-24-1P
677775-91-6P 677775-92-7P 677775-93-8P 677775-94-9P
677775-96-1P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);
PREP (Preparation); RACT (Reactant or reagent)
(polymerizable silicon-contg. compd. for polymer resist compn.
and patterning process)
IT 677775-97-2P **677775-98-3P** 677775-99-4P 677776-00-0P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)
(polymerizable silicon-contg. compd. for polymer resist compn.
and patterning process)

L34 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
1993:495822 Document No. 119:95822 Process for preparation of silyl
ketene acetals. Dinh, Paul C.; Gray, Jeff A.; Lo, Peter Y. K. (Dow
Corning Corp., USA). U.S. US 5208358 A 19930504, 5 pp. (English).
CODEN: USXXAM. APPLICATION: US 1992-912433 19920713.
AB The title compds. R12CHCR1:C(OSiR3)(OR2) [R = C1-20 alkyl or alkoxy,
C4-20 cycloalkyl, halogenated hydrocarbyl, aryl, aryloxy; R1 = H, R;
R2 = C1-20 alkyl, halogenated hydrocarbyl, aryl, triorganosilyl,
(CH2)nOR3 (n = 1-10; R3 = alkyl, cycloalkyl, halogenated
hydrocarbyl, aryl, triorganosilyl)] were prep'd. by reaction of R3SiH
with R12C:CR1CO2R2 in presence of RhCl(Me3CSCMe3)2 catalyst at
20-100°. E.g., Me methacrylate (111 g) and 1.23 g of a
toluene soln. contg. 0.0285 g of the catalyst and 0.297 g of
2,6-di-tert-butyl-4-methylphenol (radical inhibitor) were treated
with Me3SiH (107 g) at 55-60°. After addn. of 110%
stoichiometric amt. of Me3SiH, the yield of Me2C:C(OMe)OSiMe3 was
80.5%, along with CH2:CMeCH(OMe)OSiMe3 (4.6%) and Me3SiCH2CHMeCO2Me
(0.7%).
IT **148876-29-3P 148876-31-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 148876-29-3 HCAPLUS
CN Propanoic acid, 2-methyl-3-(trimethylsilyl)-, 2-
[(trimethylsilyl)oxy]ethyl ester (9CI) (CA INDEX NAME)



RN 148876-31-7 HCAPLUS

CN Propanoic acid, 2-methyl-3-(trimethylsilyl)-, trimethylsilyl ester
(9CI) (CA INDEX NAME)

IC ICM C07F007-08

ICS C07F007-18

INCL 556445000

CC 29-6 (Organometallic and Organometalloidal Compounds)

IT 18388-42-6P 31469-15-5P 31469-25-7P 85248-36-8P 109081-61-0P

109081-63-2P 148876-28-2P **148876-29-3P** 148876-30-6P**148876-31-7P**RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)L34 ~~ANSWER 3 OF 10~~ HCAPLUS COPYRIGHT 2006 ACS on STN

1982:35532 Document No. 96:35532 Allylcarboxylic acid derivatives.

(Sakurai, Hideki, Japan). Jpn. Kokai Tokkyo Koho JP 56110693 A2

19810901 Showa, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP

1980-14170 19800207.

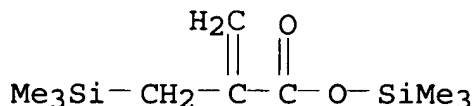
AB Allylcarboxylic acid derivs. $\text{Me}_3\text{SiCH}_2\text{C}(\text{:CH}_2)\text{COR}$ (I, R = OH, OEt, OSiMe₃, Cl, OCMe₃) were prepd. Thus, 168 g $\text{H}_2\text{C}(\text{CO}_2\text{Et})_2$ in EtOH was added to 23 g Na in EtOH over 30 min under N, the mixt. refluxed 30 min, 123 g Me_3SiCl added over 2 h, and the whole stirred 24 h with heating to give 81% $\text{Me}_3\text{SiCH}_2\text{CH}(\text{CO}_2\text{Et})_2$ (II). A mixt. of 25.4 g II and 5.3 g 50% oily NaH in C_6H_6 was stirred 1.5 h, 26 g CH_2Br_2 added, and the whole stirred 5 h with heating to give 84% $\text{Me}_3\text{SiCH}_2\text{C}(\text{CH}_2\text{Br})(\text{CO}_2\text{Et})_2$ (III). Stirring 63 g III with 39.6 g 85% KOH in aq. EtOH 25 h with heating gave 82% I (R = OH) and 15% I (R = OEt).

IT **56407-78-4P**RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 56407-78-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, trimethylsilyl ester

(9CI) (CA INDEX NAME)



IC C07F007-08; C07F007-18; C07F007-22

CC 29-6 (Organometallic and Organometalloidal Compounds)

IT 26449-03-6P 26613-71-8P **56407-78-4P** 74976-84-4P
 75366-35-7P 75366-36-8P 75366-37-9P 75366-39-1P 75366-40-4P
 75366-41-5P 75366-43-7P 80421-81-4P 80421-82-5P 80421-83-6P
 80421-84-7P

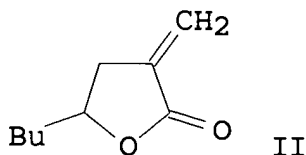
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

L34 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1980:604013 Document No. 93:204013 Chemistry of organosilicon compounds. 134. (2-Alkoxy carbonylallyl)trimethylsilanes as new reagents of 2-alkoxy carbonylallylation of electrophiles. Hosomi, Akira; Hashimoto, Hidehiko; Sakurai, Hideki (Dep. Chem., Tohoku Univ., Sendai, 980, Japan). Tetrahedron Letters, 21(10), 951-4 (English) 1980. CODEN: TELEAY. ISSN: 0040-4039. OTHER SOURCES: CASREACT 93:204013.

GI



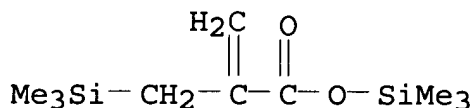
AB Reaction of 2-alkoxy carbonylsilanes with acetals and carbonyl compds. in the presence of Lewis acids gave alkoxy carbonylallylated products. Thus, $\text{Me}_3\text{SiCH}_2\text{C}(\text{:CH}_2)\text{CO}_2\text{Et}$ (I) with $\text{MeCH}(\text{OEt})_2$ and TiCl_4 at 0° for 6 h gave 89% $\text{EtO}_2\text{CC}(\text{:CH}_2)\text{CHMeOEt}$. Similarly I with BuCHO and TiCl_4 at $0-25^\circ$ for 3 h gave 25% II. I was prepd. from $\text{CH}_2(\text{CO}_2\text{Et})_2$ and $\text{Me}_3\text{SiCH}_2\text{Cl}$.

IT **56407-78-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (prepn. and reaction of, with acetals)

RN 56407-78-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, trimethylsilyl ester
 (9CI) (CA INDEX NAME)



CC 23-17 (Aliphatic Compounds)

IT **56407-78-4P** 74976-84-4P 75366-35-7P 75366-36-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (prepn. and reaction of, with acetals)

L34 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1977:535569 Document No. 87:135569 Reaction of hydrosilanes with
 methacrylic acid esters. Grishko, A. N.; Nefed'eva, S. A.;
 Suvorova, T. G. (USSR). Sintez Vysokomolekul. Produktov na Osnove
 Sapropelitov i Kremniorgan. Soedin. (Ch. 1), 10-16 From: Ref. Zh.,
 Khim. 1977, Abstr. No. 8ZH339 (Russian) 1976.

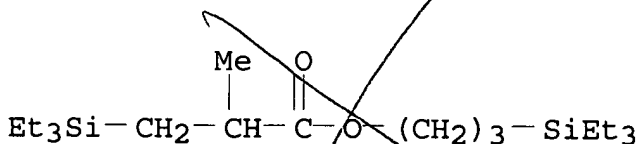
AB Title only translated.

IT **63620-23-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 63620-23-5 HCAPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, 3-(triethylsilyl)propyl
 ester (9CI) (CA INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)

IT **63620-07-5P** **63620-08-6P** **63620-09-7P** **63620-10-0P** **63620-11-1P**
63620-12-2P **63620-13-3P** **63620-14-4P** **63620-15-5P** **63620-16-6P**
63620-17-7P **63620-18-8P** **63620-19-9P** **63620-20-2P** **63620-21-3P**
63620-23-5P **63657-53-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

L34 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1977:190126 Document No. 86:190126 Trialkyl(triorganylsilylacyloxy)stannanes and trialkyl(triorganylsilylalkylthio)stannanes and their bactericidal and fungicidal activity. Voronkov, M. G.; Mirskov, R. G.; Stankevich, O. S.; Sitnikova, S. P.; Orgil'yanov, L. V.; Malkova, T. I.; Platonova, A. T. (Irkutsk. Inst. Org. Khim., Irkutsk, USSR). Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Khimicheskikh Nauk (1), 128-34 (Russian) 1977. CODEN: IZSKAB. ISSN: 0002-3426.

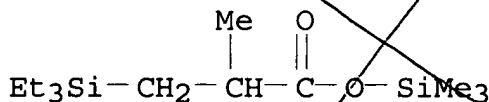
AB Sixteen title compds. $\text{Et}_3\text{SnO}_2\text{CCH}_2\text{CH}_2\text{SiR}_1\text{R}_2\text{R}_3$ (I, R = H, Me; R₁, R₂, R₃ = Me, Et, EtO) and $\text{R}_4\text{SnS}(\text{CH}_2)_n\text{SiR}_5$ (II, R₄ = Et, Bu; R₅ = Me, MeO, Et, EtO; n = 1-3) were prep'd. in 47-97% yields. Thus, heating $\text{Me}_3\text{SiO}_2\text{CCH}_2\text{CH}_2\text{SiEt}_3$ with Et_3SnOMe at 140-5° 2 h gave 49% $\text{Et}_3\text{SnO}_2\text{CCH}_2\text{CH}_2\text{SiEt}_3$. I and II exhibit bactericidal and fungicidal activity when tested against Staphylococcus aureas, Escherichia coli, Aspergillus niger, Penicillium cyclopium, etc., and are bactericidal and fungicidal additives for polymers.

IT 43123-27-9

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (fungicidal activity of)

RN 43123-27-9 HCAPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, trimethylsilyl ester (9CI) (CA INDEX NAME)



CC 29-8 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 5

IT 56-35-9 43123-27-9 62924-45-2

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (fungicidal activity of)

L34 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

1976:105703 Document No. 84:105703 Trialkyl(triorganylsilylacyloxy)stannanes. Voronkov, M. G.; Mirskov, R. G.; Ishchenko, O. S.; Sitnikova, S. P. (Irkutsk. Inst. Org. Khim., Irkutsk, USSR). Zhurnal Obshchei Khimii, 45(12), 2634-8 (Russian) 1975. CODEN:

ZOKHA4. ISSN: 0044-460X.

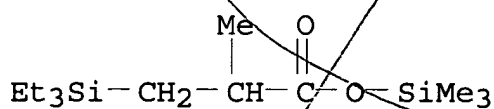
AB Hydrosilylation of $\text{H}_2\text{C}:\text{CRCO}_2\text{SiMe}_3$ with HSiR_1R_2 gave .apprx.11-56% yield of 6 $\text{Me}_3\text{SiO}_2\text{CCHRCH}_2\text{SiR}_1\text{R}_2$, which were transesterified with R_3SnOH , $(\text{R}_3\text{Sn})_2\text{O}$, or R_3SnOMe to give 50-90% yield of 9 $\text{R}_3\text{SnO}_2\text{CCHRCH}_2\text{SiR}_1\text{R}_2$ ($\text{R} = \text{H}, \text{Me}; \text{R}_1 = \text{Me}, \text{Et}, \text{OEt}; \text{R}_2 = \text{Et}, \text{OEt}; \text{R}_3 = \text{Et}, \text{Bu}$). Thus, hydrosilylation of 15.8 g $\text{Me}_3\text{SiO}_2\text{CCMe}:\text{CH}_2$ with 11.6 g Et_3SiH gave 55.6% $\text{Me}_3\text{SiO}_2\text{CCHMeCH}_2\text{SiEt}_3$, which, with Et_3SnOMe gave 97.7% $\text{Et}_3\text{SnO}_2\text{CCHMeCH}_2\text{SiEt}_3$ (I), with $(\text{Et}_3\text{Sn})_2\text{O}$ gave 87% I, and with Et_3SnOH gave 80.7% I.

IT **43123-27-9P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and transesterification of, with tin org. compds.)

RN 43123-27-9 HCAPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, trimethylsilyl ester (9CI) (CA INDEX NAME)

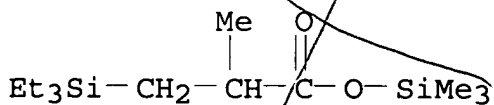


IT **43123-27-9**

RL: RCT (Reactant); RACT (Reactant or reagent)
(transesterification of, with triethyl(methoxy)stannanes)

RN 43123-27-9 HCAPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, trimethylsilyl ester (9CI) (CA INDEX NAME)



CC 29-8 (Organometallic and Organometalloidal Compounds)

IT 23416-03-7P 23416-05-9P **43123-27-9P** 58566-94-2P

58566-95-3P 58566-96-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and transesterification of, with tin org. compds.)

IT **43123-27-9**

RL: RCT (Reactant); RACT (Reactant or reagent)

(transesterification of, with triethyl(methoxy)stannanes)

L34 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
 1975:478500 Document No. 83:78500 Flash thermolysis of silyl esters of malonic acid. New route to ketenes. Thermal rearrangements of trimethylsilyl diester of cyclopropane-1,1-dicarboxylic acid. Bloch, R.; Denis, J. M. (Lab. Carbocycles, Univ. Paris-Sud, Orsay, Fr.). Journal of Organometallic Chemistry, 90(1), C9-C12 (French) 1975. CODEN: JORCAI. ISSN: 0022-328X.

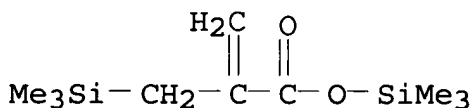
GI For diagram(s), see printed CA Issue.

AB Flash thermolysis of trimethylsilyl esters of malonic acid and dimethylmalonic acid leads resp. to ketene and dimethylketene via their trimethylsilyl acetals. Thermolysis or flash thermolysis of trimethylsilyl cyclopropane-1,1-dicarboxylate leads to dimethyleneketene trimethylsilyl acetal (I) which undergoes interesting rearrangements involving 1,3-trimethylsilyl transfer from oxygen to carbon.

IT **56407-78-4P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 56407-78-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, trimethylsilyl ester (9CI) (CA INDEX NAME)



CC 23-15 (Aliphatic Compounds)
 Section cross-reference(s): 22, 24, 29

IT 463-51-4P 6004-44-0P 31580-84-4P **56407-78-4P**
 56407-79-5P 56407-80-8P 56407-82-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

L34 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
 1973:453482 Document No. 79:53482 Trialkyl(trialkylsilylacyloxy)stannates(IV). Voronkov, M. G.; Mirskov, R. G.; Ishchenko, O. S.; Korotaeva, I. M. (Irkutsk. Inst. Org. Khim., Irkutsk, USSR). Zhurnal Obshchei Khimii, 43(5), 1198-9 (Russian) 1973. CODEN: ZOKHA4. ISSN: 0044-460X.

AB Exchange between $\text{R}_3\text{SiO}_2\text{CCHR}_1\text{CH}_2\text{SiR}_3$ and R_{23}SnOH , R_{23}SnOR or $(\text{R}_{23}\text{Sn})_2\text{O}$ gave 90% $\text{R}_3\text{SiCH}_2\text{CHR}_1\text{CO}_2\text{SnR}_{23}$ (I; $\text{R}_3 = \text{Et}_3, \text{Me}(\text{EtO})_2$; $\text{R}_1 = \text{H}, \text{Me}$; $\text{R}_{23} = \text{Et}_3, \text{Me}_3, \text{Bu}_3$) and appropriately substituted R_3SiOX .

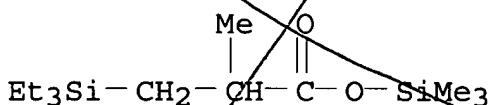
The starting materials were prepd. from R_3SiH and $R_3SiO_2CCR_1:CH_2$. Similarly was prepd. $Bu_2Sn(O_2CCHMeCH_2SiEt_3)_2$ (60-5%). The exchange was accomplished in several hrs at .apprx.100°.

IT 43123-27-9

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with triethylmethoxystannane)

RN 43123-27-9 HCAPLUS

CN Propanoic acid, 2-methyl-3-(triethylsilyl)-, trimethylsilyl ester
(9CI) (CA INDEX NAME)



CC 29-8 (Organometallic and Organometalloidal Compounds)

IT 43123-27-9

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with triethylmethoxystannane)

L34 ANSWER 10 OF.10 HCAPLUS COPYRIGHT 2006 ACS on STN

1967:76077 Document No. 66:76077 Synthesis of lactones and lactams with silicon atom in the ring. Mironov, V. F.; Fedotov, N. S. (Inst. Organosilicon Compds., Moscow, USSR). Khimiya Geterotsiklicheskikh Soedinenii (3), 453-6 (Russian) 1966. CODEN: KGSSAQ. ISSN: 0132-6244.

GI For diagram(s), see printed CA Issue.

AB Methacrylic acid (51 g.) was added to a stirred mixt. of 70 g. Me_3SiCl , 95 g. Et_2NH , and 500 ml. abs. Et_2O to give $Me_3SiOC(O)MeC:CH_2$ (I); similarly were prepd. $Me_3SiOC(O)CH:CH_2$ (II) and $Me_3SiOC(O)CH_2CH:CH_2$ (III) from acrylic acid and vinylacetic acid, resp. I (62 g.) was added during 2 hrs. to a boiling mixt. of 43 g. $ClCH_2SiMe_2H$ and 1 ml. 0.1M soln. H_2PtCl_6 in iso- $PrOH$ to yield $Me_3SiOC(O)MeCHCH_2SiMe_2CH_2Cl$ (IV); similarly were prepd. $Me_3SiOC(O)(CH_2)_3Me_2SiCH_2Cl$ (V) and $Me_3SiOC(O)MeCHCH_2SiMe_2Et$ (VI) from II and $ClCH_2Me_2SiH$ or I and Me_2EtSiH , resp. [TABLE OMITTED] A mixt. of IV (77 g.) and 50 ml. H_2O was stirred strongly at 60° for 2 hrs. to give $ClCH_2SiMe_2CH_2MeCHCO_2H$ (VII); similarly were obtained $EtMe_2SiCH_2MeCHCO_2H$ (VIII) and $ClCH_2Me_2Si(CH_2)_3CO_2H$ (IX) from VI or V, resp., and H_2O . Anhyd. Na_2CO_3 (20 g.) was added to 40 g. VII and the mixt. heated at 100-20° for 1 hr. to yield X; similarly was prepd. XI from IX and Na_2CO_3 . A treatment of VII with $SOCl_2$ gave $ClCH_2Me_2SiCH_2MeCHCOCl$ (XII); XII treated with NH_3 yielded $ClCH_2Me_2SiCH_2MeCHCONH_2$ (XIII). $MeONa$ (8.2 g.) was added

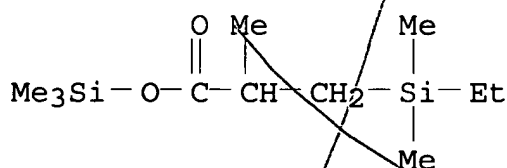
to 10 g. XIII in 50 ml. abs. MeOH, boiled for 1 hr. to give XIV. A treatment of IX with SOCl₂ gave ClCH₂MeSi(CH₂)₃COCl (XV). A reaction of XII with H₂O yielded (ClCH₂Me₂SiCH₂MeCHCO)₂O (XVI).

IT **13688-85-2P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 13688-85-2 HCAPLUS

CN Propionic acid, 3-(ethyldimethylsilyl)-2-methyl-, trimethylsilyl ester (8CI) (CA INDEX NAME)



CC 29 (Organometallic and Organometalloidal Compounds)

IT 7803-62-5DP, Silane, carboxylalkyl and cyclic derivs. 13688-52-3P

13688-53-4P 13688-54-5P 13688-55-6P 13688-56-7P

13688-85-2P 13716-48-8P 13716-49-9P 13716-50-2P

13716-51-3P 13716-52-4P 13716-53-5P 13716-54-6P 13716-55-7P

13716-56-8P 13716-57-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

=> d 151 cbib abs hitstr hitind 1-19

L51 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

2005:85311 Document No. 143:193990 Preparation of 5-substituted 7,9-difluoro-5h-chromeno[3,4-f]quinoline compounds as selective progesterone receptor modulators. Zhi, Lin; Van Oeveren, Cornelis Arjan; Pedram, Bijan; Karanewsky, Donald (Ligand Pharmaceuticals Incorporated, USA). Short-Term Pat. Specif. (Hong Kong) HK 1055059 A2 20031205, 108 pp. (English). CODEN: HKXXAR. APPLICATION: HK 20030804. PRIORITY: US 2002-2002/PV417968 20021011.

GI

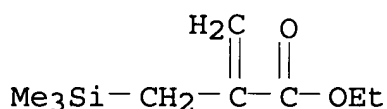
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I and II [wherein R1 = (un)substituted hetero/halo/alk(en/yn)yl, hetero/aryl; R2 = H, F, Cl, Br, I, (un)substituted hetero/halo/alk(en/yn)yl, hetero/aryl; and their pharmaceutically acceptable salts and prodrugs] were prepd. as selective progesterone receptor modulators. Thus, reacting 7,9-difluoro-1,2-dihydro-2,2,4-trimethyl-5-coumarino[3,4-f]quinoline with 4-picolylolithium gave (Z)-II as a yellow solid. In a test for agonist activity at progesterone receptors expressed in CV-1 cells, (Z)-II had an efficacy (max. response) of 103% vs. progesterone, and an agonist potency (EC50) of 7.4 nM. I may suppress estrogen-induced endometrial stimulation in uterus equally efficacious as marketed steroidal modulator compds. Three pharmaceutical compns. ar given.

IT **74976-84-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of difluorochromenoquinolines as selective progesterone receptor modulators)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



IC ICM C07D
ICS A61K

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1, 63

IT 106-37-6, 1,4-Dibromobenzene 106-39-8, 4-Bromochlorobenzene
108-36-1, 1,3-Dibromobenzene 108-37-2, 3-Bromochlorobenzene
109-72-8, n-Butyllithium, reactions 401-78-5, 3-Bromobenzotrifluoride 591-17-3, 3-Bromotoluene 762-72-1, Allyltrimethylsilane 1073-06-9, 3-Bromofluorobenzene 2599-82-8, 2-Fluorobenzyl 2635-13-4, 5-Bromo[1,3]benzodioxole 3757-88-8, (Phenylethynyl)tributyltin 6165-68-0 6165-69-1, Thiophen-3-ylboronic acid 13735-81-4, 1-Phenyl-1-[(trimethylsilyl)oxy]ethene 21369-64-2, n-Hexyl lithium 24850-33-7, (Propen-2-yl)tributyltin 26954-25-6, Picol-4-yllithium 38053-91-7, 2-[(Trimethylsilyl)oxy]-1,3-butadiene 38614-36-7, 2-Methyl-1-propenylmagnesium bromide 54663-78-4, 2-(Tributylstannyl)thiophene 54932-72-8, 5-Bromo-2-chlorotoluene 55499-73-5 64099-82-7, (1-Propynyl)tributyltin **74976-84-4**

98721-01-8, Ethyl 2-[2-[(trimethylsilyl)methyl]-2-propen-1-yl]acetate 107311-67-1, 5-Methyl-2-(tributylstannyl)thiophene 118486-94-5, 2-(Tributylstannyl)furan 118486-95-6, 5-Methyl-2-(tributylstannyl)furan 118486-97-8, N-Methyl-2-(tributylstannyl)pyrrole 148961-81-3, 2-(Tributylstannyl)benzo[b]furan 148961-88-0, 2-(Tributylstannyl)benzo[b]thiophene 153108-30-6, 2-Propynyltributyltin 352423-65-5, 5-Methoxy-2-(tributylstannyl)furan 457644-72-3, [3-(Dimethylamino)phenyl]tributyltin 861926-09-2, 7,9-Difluoro-1,2-dihydro-2,2,4-trimethyl-5-coumarino[3,4-f]quinoline 861926-18-3 861926-21-8 861926-74-1, 2,3-Dimethyl-5-(tributylstannyl)furan 861926-77-4, 3,4-Dimethyl-2-(tributylstannyl)thiophene

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of difluorochromenoquinolines as selective progesterone receptor modulators)

L51 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN
2002:255783 Document No. 137:278737 Amination of α,β -unsaturated (2-trimethylsilanylmethyl) carboxylic esters. Gasperi, Tecla; Antonietta Loreto, M.; Tardella, Paolo A.; Gambacorta, Augusto (Dipartimento di Chimica, Universita 'La Sapienza', Rome, I-00185, Italy). Tetrahedron Letters, 43(16), 3017-3020 (English) 2002. CODEN: TELEAY. ISSN: 0040-4039. OTHER SOURCES: CASREACT 137:278737. Publisher: Elsevier Science Ltd..

AB The reactions of (2-trimethylsilanylmethyl) α,β -unsatd. carboxylic Et esters with $\text{N}(\text{ONHCO}_2\text{Et})$ and CaO produce, after treatment with AcOH , α -methylene N-(ethoxycarbonyl) β -amino carboxylic esters through ring opening and elimination of the trimethylsilyl group from the intermediate aziridine. By ozonization and subsequent reductive cleavage these products give the corresponding N-(ethoxycarbonyl) β -amino α -hydroxy esters.

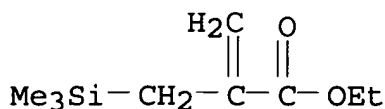
IT 74976-84-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(amination of α,β -unsatd. (trimethylsilanylmethyl) carboxylic esters)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 21-2 (General Organic Chemistry)

IT 2955-74-0 **74976-84-4** 80361-24-6 159531-03-0
464918-39-6

RL: RCT (Reactant); RACT (Reactant or reagent)
(amination of α,β -unsatd. (trimethylsilylmethyl)
carboxylic esters)

L51 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

2002:124477 Document No. 137:20143 One-pot, three-component synthesis of open-chain, polyfunctional sulfones. Bouchez, Laure; Vogel, Pierre (Institut de chimie moleculaire et biologique de l'Ecole Polytechnique Federale de Lausanne, Switz.). Synthesis (2), 225-231 (English) 2002. CODEN: SYNTBF. ISSN: 0039-7881. OTHER SOURCES: CASREACT 137:20143. Publisher: Georg Thieme Verlag.

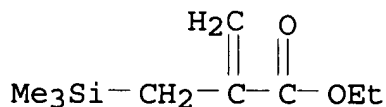
AB Silyl enol ethers of esters, ketones, as well as allylstannane and allylsilanes react with sulfur dioxide/activated with $\text{Me}_3\text{CMe}_2\text{SiO}_3\text{SCF}_3$ to give silyl sulfinates that can be reacted in the same pot with a variety of electrophiles generating the corresponding polyfunctional sulfones. The silyl sulfinates intermediates are formed via ene-reactions following probably concerted mechanisms.

IT **74976-84-4**

RL: RCT (Reactant); RACT (Reactant or reagent)
(one-pot, three-component synthesis of open-chain, polyfunctional sulfones)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 23-11 (Aliphatic Compounds)

IT 105-36-2 762-72-1, Allyltrimethylsilane 816-40-0 1453-98-6
1833-53-0, 2-Trimethylsilyloxypropene 7446-09-5, Sulfur dioxide,
reactions 18292-38-1, Methallyltrimethylsilane 24850-33-7,

Allyltributylstannane 34880-70-1 **74976-84-4**

115095-37-9 433925-12-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(one-pot, three-component synthesis of open-chain, polyfunctional sulfones)

L51 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

2000:431276 Document No. 133:164114 Pummerer-type α -functionalization of arylselenenyl acetates by treating with trimethylsilyl- or tri-n-butylstannyl-masked nucleophiles and trifluoroacetic anhydride or a Lewis acid. Shimada, Kazuaki; Kikuta, Yutaka; Koganebuchi, Hiroyuki; Yonezawa, Fumi; Aoyagi, Shigenobu; Takikawa, Yuji (Department of Applied Chemistry and Molecular Science, Faculty of Engineering, Iwate University, Iwate, 020-8551, Japan). Tetrahedron Letters, 41(23), 4637-4640 (English) 2000. CODEN: TELEAY. ISSN: 0040-4039. OTHER SOURCES: CASREACT 133:164114. Publisher: Elsevier Science Ltd..

AB Arylselenenylacetates underwent facile α -functionalization on treatment with trimethylsilyl- or tri-n-butylstannyl-masked nucleophiles and trifluoroacetic anhydride (TFAA) or a Lewis acid. Thus, reaction of $\text{ROCOCH}_2\text{Se}(\text{O})\text{Ph}$ with allyltrimethylsilane in the presence of $(\text{CF}_3\text{CO})_2\text{O}$ in CH_2Cl_2 gave 42% $\text{ROCOCH}(\text{SePh})\text{CH}_2\text{CH}:\text{CH}_2$ (R = 1-menthyloxy).

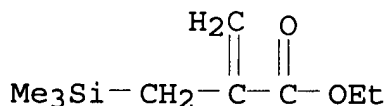
IT **74976-84-4**, [2-(Ethoxycarbonyl)allyl]trimethylsilane

RL: RCT (Reactant); RACT (Reactant or reagent)

(Pummerer-type α -functionalization of arylselenenyl acetates by treating with trimethylsilyl- or tributylstannyl-masked nucleophiles and trifluoroacetic anhydride or Lewis acid)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



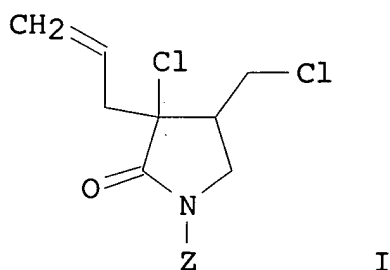
CC 29-8 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 21, 30, 31

IT 109-63-7, Boron trifluoride etherate 407-25-0, Trifluoroacetic anhydride 762-72-1 4648-54-8, Trimethylsilyl azide 24850-33-7, Allyltributylstannane **74976-84-4**, [2-(Ethoxycarbonyl)allyl]trimethylsilane
RL: RCT (Reactant); RACT (Reactant or reagent)

(Pummerer-type alpha-functionalization of arylselenenyl acetates by treating with trimethylsilyl- or tributylstannyl-masked nucleophiles and trifluoroacetic anhydride or Lewis acid)

L51 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN
2000:124080 Document No. 133:17350 Stereochemistry of
 α -alkyl- α,γ -dichloro- γ -lactams. Iwamatsu,
Shoichi; Matsubara, Kouki; Kondo, Hideo; Nagashima, Hideo (Grad.
Sch. of Eng. Sci., and Inst. of Adv. Mater. Stud., Kyushu Univ.,
Japan). Kyushu Daigaku Chuo Bunseki Senta Hokoku, Volume Date 1999,
17, 13-20 (Japanese) 2000. CODEN: KDCHEW. ISSN: 0916-0892. OTHER
SOURCES: CASREACT 133:17350. Publisher: Kyushu Daigaku Chuo Bunseki
Senta.

GI



AB The addn. reactions of α,α,γ -trichlorinated
 γ lactams to olefins proceeded at 40-83° in the
presence of catalytic amts. of CuCl (2,2'-bipyridine). Reactions of
N-tosyl or N-benzyl-3,3-dichloro-4-(chloromethyl)pyrrolidin-2-one
with allyltrimethylsilane followed by treatment with silica gel
afforded α -allyl- α,γ -lactams (I; Z =
p-toluenesulfonyl, CH₂Ph) of which diastereomer ratios were 9:1-8:2.
Although detn. of their stereochem. by NMR spectroscopy was
problematic, crystallog. anal. revealed that stereochem. of the
major isomer was the cis-form, which was thermodynamically more
stable than the trans-form.

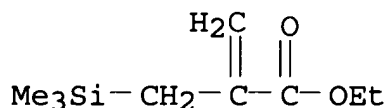
IT 74976-84-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of α -alkyl- α,γ -dichloro- γ -lactams
by addn. reactions of 3,3-dichloro-4-(chloromethyl)pyrrolidin-2-
one derivs. with olefins)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)

(CA INDEX NAME)



CC 27-10 (Heterocyclic Compounds (One Hetero Atom))

IT 115-11-7, 2-Methylpropylene, reactions 513-81-5,
 2,3-Dimethyl-1,3-butadiene 592-41-6, 1-Hexene, reactions
 1192-37-6, Methylenecyclohexane 74976-84-4 91989-84-3
 145593-46-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of α -alkyl- α,γ -dichloro- γ -lactams

by addn. reactions of 3,3-dichloro-4-(chloromethyl)pyrrolidin-2-one derivs. with olefins)

L51 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1999:487121 Document No. 131:144983 Free-radical chain transfer
 polymerization process. Rizzardo, Ezio; Meijs, Gordon Francis;
 Thang, San Hoa (Commonwealth Scientific and Industrial Research
 Organisation, Australia). U.S. 5932675 A 19990803, 23 pp.
 (English). CODEN: USXXAM. APPLICATION: US 1997-823299 19970321.
 PRIORITY: US 1989-372357 19890605; US 1991-731393 19910717; US
 1993-72687 19930607; US 1994-325496 19941019; US 1995-478515
 19950607.

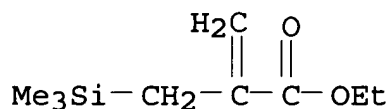
AB A process for the prodn. of lower mol. wt. polymers by free-radical
 polymn. uses $\text{CH}_2=\text{C}[\text{CH}_2\text{X}(\text{R}_2)_n]\text{R}_1$ as alternatives to thiols or other
 chain transfer agents for the control of mol. wt., where R1 is a
 group capable of activating vinylic carbon toward free radical
 addn., exclusive of hydrogen, R2 is alkyl, alkenyl, alkynyl, or a
 satd, unsatd. or arom. carbocyclic or heterocyclic ring, optionally
 contg. hydroxy, amino, halogen, phosphonate, trialkylsilyl, cyano,
 epoxy, carboxylic acid, carboxylic acid ester, allyl or alkyl
 substituents, X is S, Si, Se, P, Br, Cl, Sn, phosphonate, sulfoxide
 sulfone or phosphine oxide, and n is 0-3, such that the valency of X
 is satisfied and, when n > 1, R2 is identical or different. Thus, Me
 methacrylate contg. azobisisobutyronitrile and α -(tert-
 butanethiomethyl)styrene (I) was polymd. for 1 h at 60° in
 the absence of oxygen. The chain transfer const. calcd. for I was
 1.24, indicating that I was an efficient chain transfer agent and
 produced poly(Me methacrylate) of low mol. wt. in a controlled
 manner.

IT 74976-84-4P

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(chain-transfer agent; for mol. wt. control in free-radical polymn. of vinyl compds.)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



IC ICM C08F002-38

INCL 526289000

CC 35-4 (Chemistry of Synthetic High Polymers)

IT 25150-08-7P 25186-51-0P 51876-00-7P 51876-03-0P 60154-85-0P,
 α -(2-Hydroxyethylthiomethyl)styrene **74976-84-4P**
89295-32-9P, Ethyl α -(benzenesulfonylmethyl)acrylate
92822-43-0P 108286-71-1P 116233-34-2P, α -(tert-
Butylthiomethyl)styrene 116233-35-3P 118729-71-8P 118729-73-0P
118769-89-4P 118769-92-9P 118769-96-3P 118769-99-6P
118770-08-4P 118770-23-3P 118770-39-1P, α -
Benzyloxyacrylonitrile 118770-44-8P, Methyl α -
benzyloxyacrylate 118770-49-3P, α -Benzyloxyacrylamide
118770-56-2P, α -(4-Methoxycarbonylbenzyloxy)styrene
118770-59-5P 118770-64-2P, α -(4-Cyanobenzyloxy)styrene
118770-67-5P 118770-70-0P 118770-72-2P, α -Benzyloxy[4-
chloromethyl]styrene] 118770-74-4P 118770-76-6P 118770-80-2P
118770-83-5P 118770-85-7P 118770-87-9P 118770-90-4P
118770-92-6P 118770-95-9P 118770-97-1P 118770-99-3P
118992-87-3P

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(chain-transfer agent; for mol. wt. control in free-radical polymn. of vinyl compds.)

L51 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1999:118488 Document No. 130:252209 Copper-catalyzed facile carbon-carbon bond forming reactions at the α -position of α,α,γ -trichlorinated γ -lactams. Iwamatsu, Sho-Ichi; Kondo, Hideo; Matsubara, Kouki; Nagashima, Hideo (Department of Molecular Science and Technology, Graduate School of Engineering Sciences, Kyushu University, Fukuoka, 816-8580, Japan).

Tetrahedron, 55(6), 1687-1706 (English) 1999. CODEN: TETRAB. ISSN: 0040-4020. OTHER SOURCES: CASREACT 130:252209. Publisher: Elsevier Science Ltd..

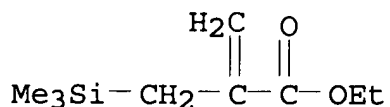
AB Treatment of α,α,γ -trichlorinated γ -lactams with a catalytic amt. of $\text{CuCl}(\text{bipyridine})$ complex resulted in facile activation of their carbon-chlorine bond at the α -position. Addn. of the carbon moiety and the chlorine atom to olefins furnished the carbon-carbon bond forming reaction at the α -position of the carbonyl group. In certain trichlorinated γ -lactams including a carbon-carbon double bond at an appropriate position, intramol. addn. reactions took place to give bicyclic lactams. Sequential reactions consisting of the cyclization of N-allyl trichloroacetamides followed by the inter- or intramol. carbon-carbon bond forming reactions at the α -position of the lactams were also achieved. Efficiency of the catalyst and reaction rate was dependent on the protecting group of the nitrogen atom of the γ -lactams; N-tosyl derivs. gave better results than the corresponding N-benzyl homologs. The mol. structure of the representative products revealed the stereochem. outcome of the reactions.

IT 74976-84-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(copper-catalyzed facile carbon-carbon bond forming reactions at the α -position of α,α,γ -trichlorinated γ -lactams)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 27-10 (Heterocyclic Compounds (One Hetero Atom))

IT 115-11-7, 2-Methylpropene, reactions 513-81-5,
2,3-Dimethyl-1,3-butadiene 592-41-6, 1-Hexene, reactions
762-72-1, Allyltrimethylsilane 1192-37-6, Methylenecyclohexane
74976-84-4 91989-79-6 145610-58-8 221450-43-7
221450-44-8

RL: RCT (Reactant); RACT (Reactant or reagent)
(copper-catalyzed facile carbon-carbon bond forming reactions at the α -position of α,α,γ -trichlorinated γ -lactams)

L51 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1997:41864 Document No. 126:60291 Saccharopeptides and derivatives thereof. Fugedi, Peter; Peto, Csaba F.; Holme, Kevin R.; Wang, Li (Glycomed Incorporated, USA). PCT Int. Appl. WO 9635700 A1 19961114, 198 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-US6731 19960510. PRIORITY: US 1995-438669 19950510.

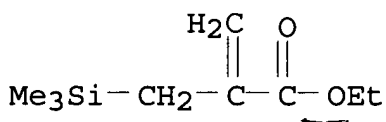
AB Glycomimetic saccharopeptides W-(X)_n-Y-[(X)_n-W-(X)_n-Y]_m-(X)_n-W [W = saccharide residue, aryl, aralkyl, alkyl or substituted alkyl, cycloalkyl, heterocyclic alkyl; X = aryl, aralkyl, alkyl or substituted alkyl, Y = NRCO or CONR, where R = H, alkyl, aralkyl; n = 0, 1; m = 0-99] and their pharmaceutically acceptable salts were prepd. Thus, N-(β-D-glucopyran-1-osyl uronic acid)-1-azido-1-deoxy-β-D-glucopyranuronamide was prepd. from Me (2,3,4-tri-O-acetyl-β-D-glucopyranosyl amine)uronate and 2,3,4-tri-O-acetyl-1-azido-1-deoxy-β-D-glucopyranuronic acid. The product inhibited binding to selectin receptors E, L, and P (IC₅₀ = >1.0, 2.6, and 0.3 mM, resp.).

IT 74976-84-4, 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester

RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of saccharopeptides and their derivs.)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



IC ICM C07H015-00

ICS A61K031-70

CC 33-8 (Carbohydrates)

Section cross-reference(s): 1, 34, 63

IT 66-84-2, D-Glucosamine hydrochloride 96-35-5, Methyl glycolate 110-15-6, Butanedioic acid, reactions 124-04-9, Hexanedioic acid, reactions 503-49-1, 3-Hydroxy-3-methylglutaric acid 572-09-8, Acetobromo glucose 582-52-5 619-45-4, Methyl 4-aminobenzoate

1109-28-0, Maltotriose 1824-94-8, Methyl β -D-galactopyranoside 3616-19-1, Cellobiose octaacetate 4704-15-8
 9004-74-4 9005-49-6, Heparin, reactions 9013-15-4, Colominic acid 13992-25-1 20880-60-8, Maltose octaacetate 35737-10-1
 58632-95-4, Boc-on **74976-84-4**, 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester 76821-26-6, Maltotriose undecaacetate 145987-57-1 150256-42-1 185116-42-1
 185116-43-2

RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of saccharopeptides and their derivs.)

L51 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1991:82601 Document No. 114:82601 Chain transfer activity of some activated allylic compounds. Meijs, Gordon F.; Rizzardo, Ezio; Thang, San H. (Div. Chem. Polym., CSIRO, Clayton, 3168, Australia). Polymer Bulletin (Berlin, Germany), 24(5), 501-5 (English) 1990. CODEN: POBUDR. ISSN: 0170-0839.

AB Various olefins that were activated towards radical addn. and contained a homolytic leaving group in the allylic position were effective chain-transfer agents in radical polymns. of Me (meth)acrylate, styrene, and vinyl acetate. These allylic compds. included bromides, phosphonates, stannanes, thioethers, sulfoxides, and sulfones. Allylic silanes and chlorides, however, did not possess significant chain-transfer activity. Suitable activating substituents towards radical addn. were Ph, EtOCO, CN, and AcO. Several of the compds. had an advantage over thiols in that they did not contain S.

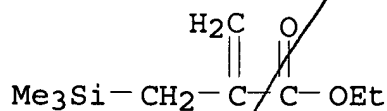
IT **74976-84-4**

RL: USES (Uses)

(chain-transfer agents, for Me methacrylate polymn.)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)



CC 35-3 (Chemistry of Synthetic High Polymers)

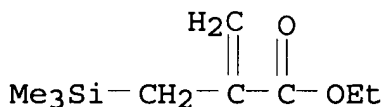
IT 106-95-6, 3-Bromo-1-propene, uses and miscellaneous

74976-84-4 108286-71-1

RL: USES (Uses)

(chain-transfer agents, for Me methacrylate polymn.)

- L51 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN
 1990:118928 Document No. 112:118928 The cerium(III)-mediated reaction of (trimethylsilyl)methylmagnesium chloride with esters and lactones: the efficient synthesis of some functionalized allylsilanes of use in annulation reactions. Lee, Thomas V.; Channon, Julia A.; Cregg, Carmel; Porter, John R.; Roden, Frances S.; Yeoh, Helena T. L. (Sch. Chem., Univ. Bristol, Bristol, BS8 1TS, UK). Tetrahedron, 45(18), 5877-86 (English) 1989. CODEN: TETRAB. ISSN: 0040-4020. OTHER SOURCES: CASREACT 112:118928.
- AB The use of cerium(III) chloride alters the chemoselectivity of the reaction of $\text{Me}_3\text{SiCH}_2\text{MgCl}$ with ester-acetals, e.g., $(\text{MeO})_2\text{CHCH}_2\text{CO}_2\text{Me}$, and also greatly improves the efficiency of reaction with lactones. In addn. it gives improved preps. of useful intermediates, e.g., $\text{ClCH}_2\text{C}(:\text{CH}_2)\text{CH}_2\text{SiMe}_3$ and gives direct access to valuable functionalized allylsilanes, e.g. $(\text{MeO})_2\text{CHC}(:\text{CH}_2)\text{CH}_2\text{SiMe}_3$ of use in annulation reactions.
- IT **74976-84-4P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
- RN 74976-84-4 HCAPLUS
- CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)

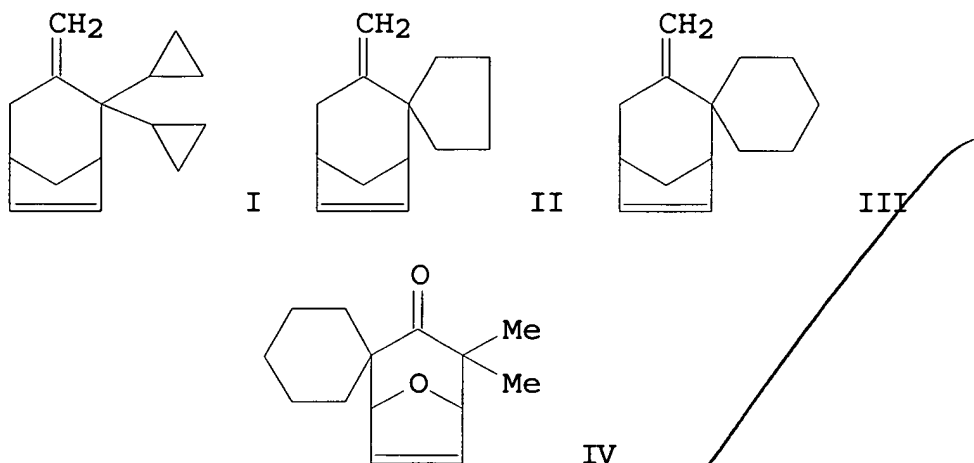


- CC 29-6 (Organometallic and Organometalloidal Compounds)
- IT 18388-03-9P 56407-82-0P 59627-56-4P **74976-84-4P**
 81302-80-9P 99667-09-1P 102234-84-4P 105941-69-3P
 108264-16-0P 116279-69-7P 116760-31-7P 121896-54-6P
 121896-55-7P 125564-74-1P 125564-75-2P 125564-76-3P
 125564-77-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

- L51 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN
 1989:497538 Document No. 111:97538 Nucleophilic organosilicon intermediates turned electrophilic: (Trimethylsilyl)methyl, trimethylsiloxy and also 2-tetrahydropyranyloxy as terminators of cycloadditions of allyl cations. A short route to dehydrozizaenes (6-methylenetricyclo[6.2.1.0^{1,5}]undec-9,10-enes) and related

tricycles and [3.2.1]-bicycles. Hoffmann, H. M. R.; Eggert, Ulrike; Gibbels, Uwe; Giesel, Kunibert; Koch, Oskar; Lies, Reinhard; Rabe, Juergen (Dep. Org. Chem., Univ. Hannover, Hannover, D-3000, Fed. Rep. Ger.). Tetrahedron, 44(13), 3899-918 (English) 1988. CODEN: TETRAB. ISSN: 0040-4020. OTHER SOURCES: CASREACT 111:97538.

GI



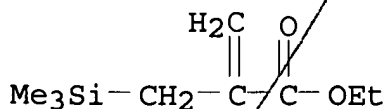
AB A range of suitable precursors were prepd. in order to contrast and use $\text{Me}_3\text{SiCH}_2-$, $\text{Me}_3\text{SiO}-$ and THPO-groups as terminators in both inter- and intramol. cycloaddns. of allyl cations to cyclic 1,3-dienes. A variety of crowded bicyclic, tricyclic, and spirofused adducts with [3.2.1] skeletons were obtained. The compds., e.g. I-IV, are of interest, e.g., in perfumery. The work contributes to the development of carbocation-induced cyclization methodol.

IT 74976-84-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bis-Grignards)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 30-15 (Terpenes and Terpenoids)

IT 31333-41-2 **74976-84-4** 94018-19-6 104281-79-0
 104281-80-3 122166-34-1 122166-35-2 122166-36-3 122166-37-4
 122166-38-5 122166-39-6 122166-40-9 122166-41-0 122166-42-1
 122166-43-2 122166-44-3 122166-46-5 122166-47-6 122166-48-7
 122166-49-8 122166-65-8 122211-49-8 122211-53-4 122211-54-5
 122211-55-6 143603-08-1

RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with bis-Grignards)

L51 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN
 1989:94110 Document No. 110:94110 Reactivity of the organozinc
 derivative of ethyl α -(bromomethyl)acrylate. El Alami, N.;
 Belaud, C.; Villieras, J. (Lab. Synth. Org. Select. Mater., Fac.
 Sci. Tech., Nantes, F-44072, Fr.). Journal of Organometallic
 Chemistry, 353(2), 157-68 (French) 1988. CODEN: JORCAI. ISSN:
 0022-328X. OTHER SOURCES: CASREACT 110:94110.

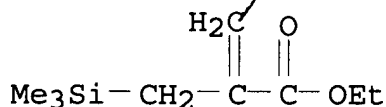
AB BrZnCH₂C(:CH₂)CO₂Et (I) is not nucleophilic towards haloalkanes but
 can be alkylated with chlorotrimethylsilane. I is unreactive
 towards carbon-oxygen single bonds and is unsuitable for conjugate
 addn. (α -enones and α,β -ethylenic esters). Its
 acylation can be carried out in DME in the presence of palladium(0)
 catalyst. Reactions with carbon-oxygen and carbon-nitrogen double
 bonds permit the prepn. of α -methylene γ -butyrolactones
 and lactams without the formation of side-products. This route is
 esp. suitable for reactions with substrates such as imines that are
 both nucleophilic and electrophilic.

IT **74976-84-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
 (CA INDEX NAME)



CC 21-2 (General Organic Chemistry)
 Section cross-reference(s): 29

IT 20593-63-9P 26613-71-8P 58557-31-6P 58557-32-7P 69504-61-6P
 71741-47-4P **74976-84-4P** 105125-05-1P 105125-09-5P
 108349-24-2P 108833-84-7P 108833-85-8P 109954-52-1P

109954-57-6P 119135-69-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

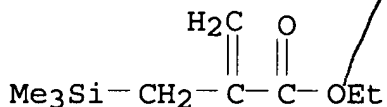
L51 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN
1989:23313 Document No. 110:23313 High yield synthesis of
 α -propargylic acrylic ester: a general access to
 α -substituted acrylic esters. Queignec, Rene; Kirschleger,
Bernard; Lambert, Francois; Aboutaj, Mohammed (CNRS, Fac. Sci.,
Nantes, F-44072, Fr.). Synthetic Communications, 18(11), 1213-23
(English) 1988. CODEN: SYNCAV. ISSN: 0039-7911. OTHER SOURCES:
CASREACT 110:23313.

AB Acrylates CH₂:CR₁CO₂Et (R₁ = propargyl, allyl, crotyl, methallyl,
ClCH:CHCH₂, PhCH₂, cinnamyl, C₆H₁₃) were prepd. from PhCOCH₂CO₂Et,
R₁X (X = Br, Cl), and HCHO. The reaction of PhCOCH₂CO₂Et with R₁X,
K₂CO₃, and NaI gave PhCOCHR₁CO₂Et, and the latter were treated with
HCHO and K₂CO₃ to give CH₂:CR₁CO₂Et.

IT 74976-84-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)

CC 23-17 (Aliphatic Compounds)

IT 2409-52-1P 3618-41-5P 20593-63-9P 54109-49-8P 54109-50-1P
54109-54-5P 74976-84-4P 106434-67-7P 110481-60-2P
118067-04-2P 118067-05-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L51 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1987:554393 Document No. 107:154393 Heterogeneous mediated alkylation
of ethyl diethylphosphonoacetate. A one pot access to
 α -alkylated acrylic esters. Kirschleger, Bernard; Queignec,
Rene (Fac. Sci., Nantes, F-44072, Fr.). Synthesis (11), 926-8
(English) 1986. CODEN: SYNTBF. ISSN: 0039-7881. OTHER SOURCES:
CASREACT 107:154393.

AB Alkylation of (EtO)₂P(O)CH₂CO₂Et with RX (R = allyl, propargyl, Bu,

n-heptyl, X = Br; R = crotyl, H₂C:CMech₂, Me₃SiCH₂, PhCH₂, ClCH:CHCH₂; X = Cl) over K₂CO₃-NaI gave 60-78% (EtO)₂P(O)CHRCO₂Et, olefination of which, with H₂CO in H₂O in the presence of K₂CO₃, gave 48-80% H₂C:CRCO₂Et.

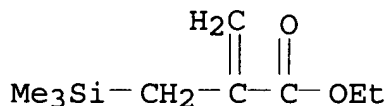
IT **74976-84-4P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(prepn. and spectra of)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 23

IT 3618-37-9P 20593-63-9P 54109-49-8P 54109-50-1P

74976-84-4P 81143-90-0P 106434-67-7P 110481-60-2P

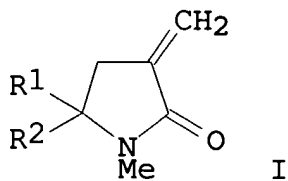
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(prepn. and spectra of)

L51 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1987:423193 Document No. 107:23193 Isolation of the Reformatskii reagent from ethyl α-(bromomethyl)acrylate. Alami, N. E.; Belaud, C.; Villieras, J. (Lab. Synth. Org. Select., Fac. Sci., Nantes, F 44072, Fr.). Tetrahedron Letters, 28(1), 59-60 (French) 1987. CODEN: TELEAY. ISSN: 0040-4039. OTHER SOURCES: CASREACT 107:23193.

GI



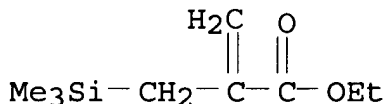
AB The Reformatskii reaction of $\text{BrCH}_2\text{C}(\text{:CH}_2)\text{CO}_2\text{Et}$ with $\text{R}_1\text{CR}_2\text{:NMe}$ ($\text{R}_1 =$ aryl, $\text{R}_2 = \text{H}$ or aryl) gave pyrrolidinones I in yields of $\geq 75\%$. Reaction of $\text{BrZnCH}_2\text{C}(\text{:CH}_2)\text{CO}_2\text{Et}$ with Me_3SiCl gave $\text{Me}_3\text{SiCH}_2\text{C}(\text{:CH}_2)\text{CO}_2\text{Et}$.

IT **74976-84-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 27-10 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): 23, 25

IT **74976-84-4P** 105125-09-5P 108833-84-7P 108833-85-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L51 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1986:88654 Document No. 104:88654 A simple synthesis of
(2-ethoxycarbonylallyl)trimethylsilane, a potential synthon for the
synthesis of 2-methylene-4-alkanolides. Haider, Akhtar (Inst. Chim.
Org., Univ. Lausanne, Lausanne, CH-1005, Switz.). Synthesis (3),
271-2 (English) 1985. CODEN: SYNTBF. ISSN: 0039-7881. OTHER
SOURCES: CASREACT 104:88654.

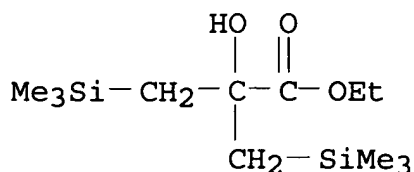
AB Grignard reaction of $\text{Me}_3\text{SiCH}_2\text{MgCl}$ with EtO_2CCOCl gave 53%
 $\text{Me}_3\text{SiCH}_2\text{C}(\text{:CH}_2)\text{CO}_2\text{Et}$.

IT **100548-24-1P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(prepn. and elimination reactions of)

RN 100548-24-1 HCAPLUS

CN Propanoic acid, 2-hydroxy-3-(trimethylsilyl)-2-
[(trimethylsilyl)methyl]-, ethyl ester (9CI) (CA INDEX NAME)

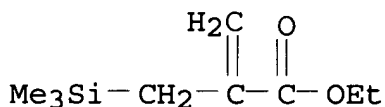


IT 74976-84-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)
(prepn. and spectra of)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)

IT 100548-24-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(prepn. and elimination reactions of)

IT 74976-84-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)
(prepn. and spectra of)

L51 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1983:159956 Document No. 98:159956 Palladium-mediated cycloaddition
approach to cyclopentanoids. Mechanistic studies. Trost, Barry M.;
Chan, Dominic M. T. (Dep. Chem., Univ. Wisconsin, Madison, WI,
53706, USA). Journal of the American Chemical Society, 105(8),
2326-35 (English) 1983. CODEN: JACSAT. ISSN: 0002-7863. OTHER
SOURCES: CASREACT 98:159956

AB The reactive intermediate in the Pd-catalyzed cycloaddn. of
Me₃SiCH₂C(CH₂OAc):CH₂ with electron-deficient olefins is probed.
The initial formation of an electrophilic π-allylpalladium
cationic complex is verified by alkylation studies. Desilylation
then provides the nucleophilic species responsible for (1)
cycloaddn., (2) aldehyde addn., and (3) desilylative alkylation.

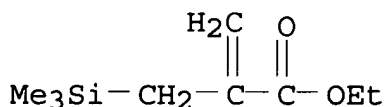
D-labeling studies verify that an unsym. species that can equilibrate all 3 methylene groups is responsible. The intervention of a (η^3 -trimethylenemethane)palladium complex accommodates all the exptl. observations. Some comments are offered to understand the differing results obtained herein compared to the cooligomerization of alkylidenecyclopropanes.

IT **74976-84-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(prepn. and reductive deuteration of)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 22-5 (Physical Organic Chemistry)
Section cross-reference(s): 67

IT **74976-84-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(prepn. and reductive deuteration of)

L51 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1982:545025 Document No. 97:145025 Cycloadditions of allyl cations.

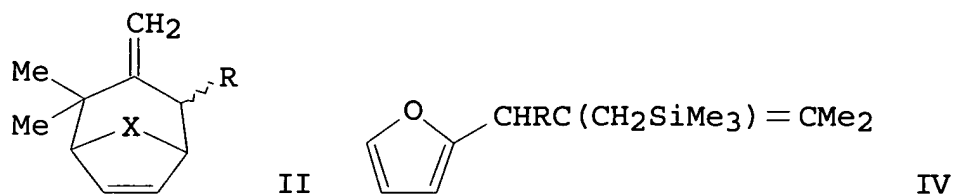
Part 30. A novel approach to complex terpenoid

methylenecyclohexanes. Henning, Rolf; Hoffmann, H. M. R. (Dep.
Chem., Univ. Hannover, Hannover, D-3000, Fed. Rep. Ger.).

Tetrahedron Letters, 23(22), 2305-8 (English) 1982. CODEN: TELEAY.

ISSN: 0040-4039. OTHER SOURCES: CASREACT 97:145025.

GI



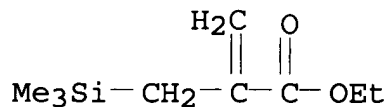
AB Trifluoroacetylation of $\text{RCH}:\text{C}(\text{CH}_2\text{SiMe}_3)\text{CMe}_2\text{OH}$ ($\text{R} = \text{H}, \text{Me}$), prep'd. in 5 steps from $(\text{EtO})_2\text{P}(\text{O})\text{CH}_2\text{CO}_2\text{Et}$, by $(\text{F}_3\text{CCO})_2\text{O}/\text{EtN}(\text{CHMe}_2)_2$ in CH_2Cl_2 at -70 to -30° gave $\text{RCH}:\text{C}(\text{CH}_2\text{SiMe}_3)\text{CMe}_2\text{O}_2\text{CCF}_3$ (I; R as before) which were activated towards cycloaddn. reactions with cyclopentadiene and furan. Cycloaddn. reaction of I ($\text{R} = \text{H}, \text{Me}$) with cyclopentadiene in MeCN in the presence of ZnCl_2 at 0° gave the corresponding cycloadducts II ($\text{X} = \text{CH}_2$) in 45 and 60% yield, resp., together with a small amt. of (E)- $\text{RCH}:\text{C}(\text{CH}_2\text{SiMe}_3)\text{CMe}:\text{CH}_2$ (III). Similar treatment of I ($\text{R} = \text{H}$) with furan gave a 1:6:3 mixt. of III ($\text{R} = \text{H}$), furan IV ($\text{R} = \text{H}$), and II ($\text{X} = \text{O}; \text{R} = \text{H}$). I ($\text{R} = \text{Me}$) reacted with furan to give a 1:2:1 mixt. of III, IV ($\text{R} = \text{Me}$), and II ($\text{X} = \text{O}, \text{R} = \text{Me}$), resp.

IT **74976-84-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prepn. and methylation of)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI) (CA INDEX NAME)



CC 30-1 (Terpenes and Terpenoids)
Section cross-reference(s): 24, 27

IT **74976-84-4P** 80361-24-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prepn. and methylation of)

L51 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2006 ACS on STN

1980:568400 Document No. 93:168400 Nature of a trimethylenemethane-

palladium complex. Trost, Barry M.; Chan, Dominic M. T. (Dep. Chem., Univ. Wisconsin, Madison, WI, 53706, USA). Journal of the American Chemical Society, 102(20), 6359-61 (English) 1980. CODEN: JACSAT. ISSN: 0002-7863.

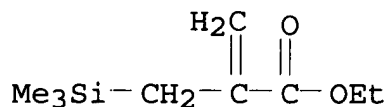
AB Trimethylenemethane (TMM) complexes of transition metals generally are considered to have all three methylene groups equiv. In contrast to such a generalization, use of deuterium labeling indicates that TMM-PdL₂ (L = e.g. Ph₃P) is unsym. in which the three methylene carbons are not equiv. The unsym. complex can be trapped. On the other hand, a pathway exists for equil. by migration of the Pd to give a functional equiv. of a sym. species. With less reactive traps, only the fully equil. species is obsd.

IT 74976-84-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(redn. of)

RN 74976-84-4 HCAPLUS

CN 2-Propenoic acid, 2-[(trimethylsilyl)methyl]-, ethyl ester (9CI)
(CA INDEX NAME)



CC 29-13 (Organometallic and Organometalloidal Compounds)

IT 74976-84-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(redn. of)

=>